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DEE ANN SUHM
and
ALEX D. KRIEGER

with the collaboration of
EDWARD B. JELKS

Volume 25, 1954
The Texas Archeological Society

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Foreword

The society was organized and chartered in pursuit of a literary and scientific undertaking; for the study of the history, prehistory and the major artifacts of man and the fossils representing the past floras and faunas of Texas; for the encouragement of the proper collection and preservation of such artifacts and fossils in museums and their study and classification and the publication of the results of the researches incident thereto.

The BULLETIN is published annually for distribution to members of the society. Opinions expressed herein are those of the writers, and do not necessarily represent views of the society or the editorial staff.
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INTRODUCTION

In many fields of science it is possible to obtain handbooks or guides which summarize knowledge in those fields, reducing a vast amount of original research by many different persons to a concise, relatively simple form. Thus, if one wishes to identify certain mammals, birds, fishes, insects, reptiles, trees, flowers, rocks, minerals, and so on, there are many books designed for this purpose, giving descriptions and illustrations of species and types, outlining their distributions and principal identifying characteristics.

For exact, positive identifications, it is still necessary to have specialists do this directly; for not only does the specialist have knowledge of the alternative possibilities, but he may have a file of material built up carefully over a long period with which he can make direct comparisons and thus eliminate errors. Handbooks are nevertheless tremendously useful for educational purposes, for the pleasure they bring in enabling each person to gain an idea of what he has found, and for what they show about the complexity of nature.

Archeology has never developed the handbook principal, except in the case of guides to individual museum collections. The archeological profession has often, and justifiably, been criticised for its clannish attitude, its refusal to make the products of its research clearly understandable to the layman. It is, however, not so much refusal to meet this obligation that impresses me, as the fact that this profession has not yet found any consistent procedures for establishing types of artifacts. By and large, each archeologist classifies to suit himself. It is as though the zoologist or botanist classified organisms in all sorts of ways, according to what seemed significant to him, but without the central concept of a species. The species concept did not reach perfection overnight, and for a long time each biologist had his own idea of how to apply it in practice. As a result, the biological world was long swamped with new "species" for almost everything collected; but in recent years re-organization has taken place and superfluous species gradually weed-
ed out. Archeology, at least in the New World, has yet to face this problem of superfluous, conflicting, and overlapping "types" of artifacts. They are created constantly, either by name or by some system of symbols, without much regard for the effect they have on other archeologists or confusions in the minds of students who attempt to understand these "types".

From a purely practical point of view, it is unreasonable to expect that everyone interested in archeology should try to remember all of the details, agreements, and conflicts, between the hundreds of "types" set up by scores of workers, without some sort of concise guide to follow. This step must come eventually for American archeologists, and we regard this "Introductory Handbook of Texas Archeology" as a step in that direction.

The word "Introductory" is necessary because this work is far from complete, even for the State of Texas. Part I consists of trait lists for the culture complexes which we regard as fairly well established. These are subject to revision as information increases; new traits may be added in the course of time; and as more studies are made it is possible that some of the traits we have listed will prove not to be associated with these complexes, but with others of earlier or later date in the same areas. We expect and welcome suggestions as to how the lists may be improved. It must be realized that great parts of the State are not represented at all in these lists—particularly the bulk of the Panhandle and the plains to the south of it—and that amateurs as well as professionals have ample opportunity to find new material.

Part II consists of descriptions of the better-known types of pottery and projectile points, also incomplete for lack of typological analysis in many parts of the State. It has been necessary to confine the type descriptions to these two categories, first because the bringing in of all other recognizable classes of artifacts would entail a great deal more research and time than we had available for this volume; and second
because of the prohibitive cost of publishing it all in a single volume. It is to be hoped that the many other classes of artifacts, houses, burials, earthworks, etc., can be formally typed and illustrated in future volumes.

We have chosen pottery and projectile points for this initial volume for a very practical reason: they provide the best clues to the presence of particular culture complexes in this State, if not elsewhere. Where definitely identifiable types of pottery and projectile points are present, it is usually seen that other traits of the same complexes are also present. However, it is necessary to warn the reader that the presence of a single type of artifact is not reliable evidence for the identification of the complex of which it is supposed to form a part. Complexes are identified through the presence of several key traits in association; a single type can—and usually does—appear as a part of several distinct complexes. In other words, several different Indian tribes living over a large area may have shared in the manufacture of a particular type of artifact, and that type would not prove the presence of one of those tribes any more than the others; but when a complex consisting of several types of weapons, utensils, skinning and sewing implements, a particular burial practice, special form of pipes, ornaments, and the like can be worked out, the total assemblage is usually distinct in some ways from the total assemblage of traits of any other tribe or cultural group. Each complex, then, is a combination of culture traits which happen to coincide in a particular way in one place or area, whereas each of the traits embraced by it will have a somewhat different distribution, traceable in different directions, from each of the others.

Archeologists have themselves been classified into “splitters” and “lumpers”. The “splitters” prefer to set up types of great refinement, so that the smallest differences are considered to designate typological distinction and a collection will be sorted into innumerable small groups of rigid uniformity. Thus, projectile points which are similar in stem and blade shape will be subdivided into “types” with short barbs, medium barbs, and long barbs; the average “splitter” would be
horrified at the suggestion that concave bases could be included in the same type with straight bases, or that pottery bottles could be included in a single type with bowls. The "lumpers", on the other hand, make only rough divisions along general lines, either because more refined types do not seem worth the effort, or because they hold no particular interest in comparing the products of man from one site to another and one region to another. In practice, very rough typing of the "lumper" variety is often quite useless for strict comparisons.

We do not identify ourselves with either of these extremes, believing that all archeological material must be analyzed for consistency, and the groupings continually tested for what they reveal about the distribution in time and space of the underlying, human idea behind the manufacture of the objects in question. Thus—as will be noticed in many of the plates in Part II—a specimen at the extreme range of variation of one type may be identical to one at the extreme range of another type. Artifacts which seem identical to the eye may each have been produced with a somewhat different pattern in mind—patterns dictated by the cultural habits of the group—and their identity is thus due to coincidence rather than to intent.

Both the "splitter" and the "lumper" have a comparatively easy time of it. The former simply puts together all specimens which look alike, and if he then has 50 "types" of arrow points for a single culture complex, this causes him neither concern nor curiosity about what the ancient people were actually doing. The "lumper" likewise is not concerned about how many actually distinct—and therefore culturally significant—styles were being manufactured by the people he is studying through their archeological remains.

Concern with the inner problems of artifact typology has been going on for many years at the University of Texas. This partly explains why it has taken so long to produce typological results such as herein presented. As recently
as the fall of 1954, when this Handbook was still being planned (due to the fact that no manuscripts were received for the 1954 Bulletin), many of the types herein presented were still quite tentative, and others had not even been created. The amount of trial sorting, re-sorting, and checking against facts of time and space distribution done between October, 1954, and April, 1955, would be impossible to convey to the reader. The types of pottery and projectile points herein presented are the principal results of that process; but many other possible types emerged which will require more study—and more material from different parts of the State—before we will know whether they constitute real types or not.

In all, over 4,000 complete pottery vessels and 200,000 potsherds have been examined. Most of these are in the University of Texas collections, but many were examined through the courtesy of private persons and museums, as acknowledged under “Plate Identifications”. We also examined intensively more than 25,000 projectile points for establishing the types, holding in reserve another 20,000 or so which were then examined to see whether the types could be readily recognized in consistent form and variation. This check showed generally good results, although we would be the first to admit that some revisions may be needed as exact data increases. In other words, there is little purpose served in juggling the types further, until specific information on distribution in space, or position in a stratigraphic sequence, is available to provide objective bases for altering the inclusiveness of a given type—information which we do not now possess. Without going into detail, the premises and procedures used to form these types are those discussed by Krieger (1944) and Newell and Krieger (1949, pp. 71-74).

A common stumbling block in archeology is to try too hard to make every specimen fit into some kind of a type. Usually this means that endless numbers of new “types” have to be created just to take care of a minority of divergent specimens. We have followed the principle that it is utterly impossible to establish the type of every specimen. Our types have been established on the basis of large samplings,
so that contrasts become clearer than in samplings of only five or ten specimens (as is too often the case in this country). The pottery types are based on a minimum of 25 complete vessels each, but most include at least 100 vessels each, and several are represented by hundreds. The single exception is in the Alto Focus types, where no complete vessels were found among 96,000 potsherds excavated; but the number of sherds in this case which revealed vessel shape and design distribution on rim and body plainly made up for their lack of completeness. As a general rule, no pottery type has been defined unless we had good knowledge of what the whole vessels looked like. The projectile-point types are based on a minimum of 100 specimens each, but few of them were so scantily represented; most consist of several hundred, and some of as many as 3,000 specimens.

The problems and headaches of sorting grow in proportion to the magnitude of the sampling, so that the more specimens, the more complete and exasperating their overlapping in all ways. On the other hand, the magnitude of our sampling has made the principal contrasts in pattern clearer, and—most important—errors in judgment have been to a large extent overcome by sheer numbers. Thus, while it was impossible to make satisfactory decisions about all specimens belonging to this or that type, the borderline cases can hardly constitute 10 per cent of the total number typed, if that much.

In the case of both pottery and projectile points, we have not even attempted as yet to establish types for minor groups which do not agree well with the many large groups. Their identification should follow as knowledge of them increases. It is particularly important that such material should be fully reported in the publications on individual sites. Thus, future reports will include frequency tabulations of types as they are given here, provided there is no argument about their reality; proposed revisions in the present types (with the reasons therefore); new types (with explanations of why they are new); and "left-overs" which do not fit into any well-established types and should be de-
Introduction

scribed and illustrated individually. The "left-overs" may eventually be expected to assume one of three statuses, hence their individual treatment in publications is of critical importance. They may be identified in due time as:

1. Representatives of new types, developed by further research in a single area, or in another area or state where they prove to be more common.

2. Intrusions, brought from elsewhere by native trade, visits, war parties, intermarriage, etc.; or intruded into a site by some sort of accident (e.g., when an Indian picked up a more ancient artifact and, out of curiosity, took it home, just as we do).

3. Curiosities and accidents: odd products of some person's imagination or "doodling" which, never having been adopted by the cultural group, or even by a second person, do not attain the status of culture traits. Included here are artifacts which probably simply did not turn out according to plan, but their deviations from normal did not spoil them for use.

* * * *

Progress in Texas archeology depends far more on research by amateurs than most of them realize. The University of Texas, contrary to popular opinion, does not provide funds for field work or site exploration; such work as has been done since the 1930's has been done on grants which have to be raised from a number of sources with a great deal of time and trouble. The University does maintain an archeological laboratory, now in comfortable new quarters with much more working and storage space than before. The University thus has the facilities for acting as a center of research, a place where archeological material can be seen and compared, where problems can be discussed, and advice given as to how amateurs can work independently.

In order to develop the typological problems initiated by this Handbook, the University needs the help of all amateurs who wish to contribute something to human knowl-
edge; from past experience, I think that this includes the majority of them. We urge that amateurs as well as professionals view the present results critically: if specimens in your collections do not seem to fit rather readily into any of the types presented here, it may very well be that new ones should be defined. This is quite possible—even probable—in those parts of the State which we have not been able to cover for lack of adequate collections in our records. However, as indicated above, new types, to be valid, must be based on quantities rather than a few odd specimens. It would be very desirable as well as practical for tentative new types to be discussed by those concerned, perhaps during the annual meetings of the Society. Various types have already been proposed independently here and there, but without reference to what is being done in other areas. This results in a multiplicity of names being coined for artifacts which are very similar if not identical, and adds to confusion without advancing the science of archeology. It is very difficult to get rid of superfluous names for the same artifacts after they have been recorded in print, and still more difficult to explain to the uninitiated why there are so many different names already in the literature which conflict with one another. This goes on in different states as well, for lack of consultation beforehand.

One of the purposes of this Handbook is to encourage amateur archeologists to analyze their own collections, and thus contribute to increasing knowledge of the thousands of years of native history of this State. Many of the most important discoveries already made in Texas and other states have been made by amateurs who not only have sharp eyes and a good sense of observation, but who learn a great deal more about the details of a small area over the years than any professional who is able to spend only a few days—or at most a few weeks—in the intensive investigation of selected sites.

We should like to see amateur archeologists throughout the State make a compilation of artifacts in their own collections, starting with the types of pottery and projectile
points described herein. The notes which we have given on distribution are very general, barely suggesting the main areas in which each type has so far been found. This has been done because we really do not know the full distribution of a single type. We have presented enough for the reader to gain some perspective, to get a general idea of what he can expect to find in various parts of the State, and the general time position of such remains. In order to increase this knowledge, and eventually to publish maps showing the full distribution of each type (and new types), we suggest the following procedures:

1. Count the specimens that you feel can be readily identified from the present descriptions and illustrations, but keep separate accounts for those found on different sites. Do not force the identification too much, for it is not to be expected that all your specimens are of known types.

2. Make outline drawings or photographs of those that do not agree, and label them by some system to indicate the sites on which they were found. If possible, bring such material to the annual meetings for discussion and comparison with other members (the Texas Archeological Society meets annually in late October or early November at a place announced by September; non-members have always been welcome too).

3. List the other classes of artifacts found on the same sites, so that associations can be checked with the trait lists in Part I and the particular culture complexes identified. We expect that new complexes will be identified in many parts of Texas, and local archeological groups can do much to discover them.

Some warnings are in order. First, a single type of artifact may have a very restricted distribution, hardly ever being found away from that area, while another may be found over half the North American continent. Many of those found in Texas will eventually be recognized far beyond the boundaries of this State, but at this point we prefer to wait for such matters to develop. Named types as de-
scribed herein should not conflict with the innumerable *numbered* "types" found in hundreds of publications. With time and patience those that are really similar and have the same meaning in history should be brought together under the same name. Second, a particular complex or "focus" cannot be recognized through any one artifact type. A single type can—and normally does—occur in two or more foci, sometimes in dozens of them, being borrowed by one cultural group after another. A focus is recognized by the presence of several key types in association. The number needed for such recognition cannot be stated exactly and advice should be sought on this point.

The most common questions asked by students of archeology are: What Indians made these artifacts? How old are they? It is one of our curious paradoxes that the most simple and obvious questions are the hardest to answer, even after years of intensive effort. The most famous Texas tribes, such as Comanche and Apache, only entered the State shortly before or after the first Europeans had explored it; and as they wandered constantly, they left no accumulation of remains anywhere that compare with those of the older, native tribes. In other cases, such as the Karankawa, Wichita, and Caddo, connections have been made with archeological material in some areas, as noted on the trait lists. For the most part, however, it is practically impossible to state that such and such artifacts were made by any particular tribes. A great field of research remains to be done on this subject, particularly in conducting excavations around Spanish missions and other historic sites, where the early documents often give the names of tribes who gathered about the settlements. Usually the pre-European material must be discussed without the use of known tribal names; thus we speak of the "people of Pecos River Focus"; "the Edwards Plateau Indians", etc., using the name of the cultural units applied to their archeological remains.

The determination of age is one of our most difficult problems. It would be of greatest benefit if we could obtain more Carbon 14 age determinations in Texas, but the labora-
tory established for this purpose at the University of Texas has not, at this writing, yet produced a dating to aid in this survey. Meanwhile, we have entered an "estimated age" in the trait lists and type descriptions which has been carefully considered from different points of view—by comparison with culture complexes elsewhere dated by Carbon 14; by comparison with tree-ring datings in New Mexico and Arizona; by stream terrace association; and so on. Any of the estimates we have used may be badly off, but we have tried to make them reasonable without being insistent. Back to about 1000 A. D. we have made estimates in spans of about two or three hundred years (1400-1700 A. D., 1200-1500 A. D., etc.), within which we think the cultural unit existed. This is not to say that the unit existed for 300 years in each case, but that it is believed to have thrived during at least a good part of that time.

Going back beyond 1000 A. D., estimates have been made in blocks of 500 years or 1000 years. We prefer them to be so generalized because there is a deplorable tendency among archeologists to publish precise dates for many phases of culture, when as a matter of fact there simply is not information enough to do any close figuring. The Southwestern culture area provides a notable exception through the tree-ring dating system, which does enable extremely close figuring, almost to an exact year in some cases, back approximately to the time of Christ.

* * * *

A word must be said about the reasons for the tardiness of this printing. During the winter and spring of 1954, Miss Suhm was a University of Texas graduate student in anthropology, and part-time office assistant to Mr. Jelks, the Texas representative of the River Basin Surveys of the National Park Service (formerly this Survey was a division of the Smithsonian Institution). Her interest in archeology and conversations with Mr. Jelks and myself and others led Miss Suhm to try to draw up a list of traits and artifact types in various parts of Texas. She also made a wall chart for purposes of clarifying the picture.
It seemed to me that this survey should be encouraged and eventually put into publication when it was full enough. By June 1954 it was time to plan the 1954 Bulletin of this Society, but instead of asking for manuscripts from various members, I decided to see what would be submitted voluntarily. Part of the summer was spent in Mexico writing a dissertation, and on my return to Austin early in September, I found that not a single manuscript had been submitted for the Bulletin, nor did anyone even indicate plans for submitting one. This left the field open for following up the idea of a guide or manual of Texas archeology. Miss Suhm and Mr. Jelks had worked on the trait lists during the summer whenever time permitted. In September we began to plan this Handbook seriously and made a survey of the amount of new typological research we would have to do to round it out.

By this time it was fully apparent that new research would have to be performed on artifact types in all parts of Texas before we could present enough of them to be really helpful for others in analyzing collections. I went through great numbers of specimens, photographs, and notes to see what could be used. By October, we were moving along fairly well and had hopes of finishing by the year's end. As in all such cases we underestimated the job or overestimated our abilities. Unfortunately, it was at this time that we lost the services of Ed Jelks. The National Park Service closed its River Basin Surveys office in Austin and transferred him to the Jamestown project in Virginia. His last month was taken up with ordering and packing the extensive files and equipment of the Austin office. From November 1st onward, Miss Suhm and I continued the research and writing alone. Due to the fact that she was now the secretary of the Anthropology Department, and I was rather desperately trying to complete other manuscripts for other deadlines, neither of us was able to spend more than a part of our time on the Handbook. After February 10th, I was able to increase this time.

The actual writing of this Handbook would not have
been too difficult if all the typological research had been well set beforehand. However, it was necessary to re-examine every pottery and projectile-point type set up by all those who have created them in the State, including the re-examination of those of the authors themselves. Adjustments were made in some of these, but it was necessary to create many new ones to take care of even the general run of artifacts in most parts of the State. Thus the experimental sorting, study, and re-sorting done by Miss Suhm and myself since November 1st has taken at least twice the time spent on actual writing.

Miss Suhm deserves the place of senior author because of her original idea of a simplified guide, the vast amount of interest, energy, and judgment that she exhibited in extracting information from the literature, her writing the first drafts of all the sections of Part I and the descriptions in Part II, and her critical and acute role in extending the typological studies. My part has been one of planning and organization, contributing unpublished information and evaluations, criticizing and reconciling previous works (including my own), re-writing most of the sections, making final decisions on most of the types, preparing the illustrations; and doing editorial work for the final printing. Jelks has provided information from excavations and collections of the River Basin Surveys in dozens of reservoir basins in Texas between 1947 and 1954, and contributed typological determinations from his own researches and those of his predecessor, Robert L. Stephenson. Jelks is also responsible for the basic scheme of four cultural stages—Paleo-American, Archaic, Neo-American, and Historic—which we have used to discuss the data; the first and third of these terms were coined by him.

This work contains deficiencies and it may raise more questions than it answers. Much more data could have been included, but we had to be brief and reduce expenses. The type descriptions have been trimmed to fit single pages facing the illustrations, except in those cases where two pages of illustration allowed two pages of description. Much
more data on types could have been included, but we hope we have included enough for general purposes, and believe that the facing-page system will prove convenient.

Each plate showing a type of projectile point attempts to convey (1) an impression of the total range of variation as we see it, with largest, smallest, broadest, narrowest, finest, and crudest extremes; variations in shoulders, barbs, shape and size of stem in relation to blade; variations in shape of base, etc.; and (2) a representation roughly reflecting the frequency of such details. Thus those variations seen least often in actuality appear least often on the plates. The pottery types also attempt to show variations in form and design distribution, but it is difficult to do this with as much success. Whole specimens cannot always be found for each variation; we have no photographic record yet of many interesting specimens in other hands; and some vessels are so decorated that it is almost impossible to make their designs show in photographs.

The trait lists in Part I do not include explanations for many decisions made about what to include and not to include in the various foci and aspects. To have done so would again have increased the length of this work, and moreover would be very confusing to the average reader. Such problems are best threshed out in the discussion sections of individual site reports and areal surveys. Here we have omitted those trait problems which cause the greatest controversies, and it may well be that traits other than the ones we have listed should belong to a particular complex.

Certain type descriptions do not agree closely with previous publications. In such cases we have noted that a change of opinion has taken place since the original work was written. The reader is to assume that the present wording is our best estimate, the previous ones obsolete.

Some type names for projectile points in central and western Texas are those coined by J. Charles Kelley many years ago, provided that they have been mentioned in print in one way or another, and quoted by other writers. Since
he has never described or illustrated any of these in any detail, we cannot be sure that his conception of their ranges of variation coincides with ours. It simply seemed best not to create new names when these had already gained some use in his and others' publications. On the other hand, scores of other type names coined by him but never described have not been used here. We have, in fact, done the projectile-point typology over again for central and western Texas, at considerable labor. This was desirable anyway, to bring a uniformity of concept into the present work for all sections of the State.

All qualifying terms have been dropped from projectile-point names, even from those which have previously been published. Thus, they are simply "Nolan points", "Gary points", "Folsom points", etc. Qualifying terms give too restrictive an idea of what variations may occur within a type. Thus, those with "Barbed" in the name need not always be barbed; those with "Contracting Stem" as part of the name may vary from sharply contracting to parallel-edged; and so on. No one is going to learn the appearance and variations of any type anyway until he has studied illustrations and gained some idea of what features to look for, just as he would with animals, plants, minerals, etc. If desired, types can always be tabulated under certain headings such as "triangular", "stemmed", "notched", "lanceolate". In pottery typology, on the other hand, there is more reason to use qualifying names such as "Engraved", "Punctated", "Stamped", "Incised", "Plain" for purposes of stressing technique and technological tradition.

* * * *

Some of the cultural terminology used herein should be briefly explained. The four stages are very broad in concept but they serve to indicate the principal differences in age of most archeological remains.

1. *Paleo-American* is used in place of the more commonly used *Paleo-Indian* because there is growing doubt that the earliest migrants to the New World from Asia were truly
Indians. They may not even have been Mongoloids (a race which some anthropologists regard as of rather recent development in Asia), but representatives of a stock which might be called proto-Caucasian. Whoever these first inhabitants were, their initial migrations occurred a long time ago. For some time it has been popularly believed that the makers of Folsom points were the New World's first inhabitants, about 10,000 years ago, but there are now evidences of much older people. We cannot guess the span of human occupation as yet, except to say that it began well back in the Glacial or Pleistocene epoch, probably as much as 25,000 years ago and perhaps much more than that. The Pleistocene, on the other hand, has been shown by Carbon 14 datings to have lasted somewhat later than previously estimated, the last full glaciation having reached its climax about 11,000 years ago. The characteristic Pleistocene mammals such as mammoth, mastodon, saber-toothed cat, native American horse, camel, giant ground sloth, giant wolf, cave bear, extinct species of bison larger than the modern one, etc., rather certainly became extinct everywhere in America by 5,000 B. C., when a long period of desert conditions (the Altithermal Age) set in, destroying the grass on which some of the animals lived, and the carnivores which lived on the grazing mammals. Most of these animals had, however, disappeared long before the Altithermal Age, or even before the last major glaciation. The large bison, probably also the sloth and dire wolf, seem to have lingered on longer than the others, so that there may have been a differential of several thousand years between the extinction of various species; and, naturally, some may have lingered longer in some areas than in others.

We therefore apply the term "Paleo-American" to those unknown people who arrived in the New World by way of northeastern Siberia at some remote but unknown time during the latest phases of the Pleistocene, lived as nomadic hunters of big game, and survived about as long as the last of the Pleistocene animal species which eventually became extinct—that is, until approximately 5,000 B. C. The term
"Paleo-American" is thus synonymous with Pleistocene inhabitants of the New World. Between approximately 11,000 and 7,000 years ago, when Pleistocene animals were finally disappearing, archeological sites show less and less evidence of the hunting of such animals, as one would expect. Thus a Plainview, Scottsbluff, or other early post-glacial type of projectile point may be found with now-extinct bison in some localities but not in others because man was now turning to other foods to exist. Milling stones and manos first appear widely in North America during this early post-glacial period, indicating use of plant foods, nuts, berries, roots, etc., which were ground into meal. It is important to note that we have distinguished between ground and polished stone artifacts, the first category consisting of implements ground by use on certain faces, the second being shaped, ground, and polished for beauty as well as utility. Thus, manos, milling stones, mortars, and pestles are the chief artifacts ground by use alone, but of these, mortars and pestles are exceedingly rare in Texas. Manos and milling stones definitely appear before the end of Pleistocene times as we define this stage, that is, in early post-glacial times, while true polished-stone artifacts do not appear until later, in the Archaic Stage, beginning perhaps as early as 4000 or 3000 B.C.

Archeological evidence of the Paleo-Americans is very scanty at best, consisting largely of choppers, scrapers, and projectile points. The earliest known projectile points, however, did not appear until America had already been inhabited for some time. These were the Sandia and Clovis types, both appearing, it now seems, somewhat before the final Wisconsin ice advance, or roughly between 18,000 and 15,000 years ago. They are therefore approximately as old as any of the Old World stone points. The Folsom type, developing out of Clovis, belongs more or less to the final major Wisconsin ice advance, called Mankato by most geologists. The Folsom type appears to have disappeared rather rapidly, by about 9000 years ago, giving way to Plainview, Scottsbluff, Eden, Anaostura, Meserve, and Browns Valley points (some
of which have been widely termed "Yuma" points) in early post-glacial time, or roughly 9,000 to 6,000 years ago.

Most of the known Paleo-American sites are simply places where characteristic Pleistocene animals were killed and butchered. The artifacts are therefore largely from the weapons used—spears or atlatl darts—and implements used for skinning and dismembering the carcasses. Dwellings, if any, and burial customs are totally unknown, nor has any evidence of domesticated dogs been found. In spite of the simple existence lived by wandering bands of people in search of game, there probably are thousands of such sites in North America alone; but because of their age and the changes in climate which have occurred, the vast majority of such sites must be buried under layers of sand and alluvium. Those which have been found have almost always been exposed by erosion of the covering materials, so that the chances of discovering them are infinitely small in proportion to the enormous amounts of covering up of ancient land surfaces.

2. An Archaic Stage is used in the usual sense in North America north of Mexico. It bridges the time between Paleo-American nomadic hunting people on the one hand, and the settled agricultural, pottery-making Indians on the other. Hunting, gathering of wild plant foods and shellfish, and fishing were all pursued. Chipped-stone artifacts cover a much wider range of classes and types than before; projectile points reveal scores of distinct shapes, most of them having stems formed by making notches in the corners in various ways. Manos and milling stones continued in use, while mortars and pestles appear widely in some regions. (Polished-stone artifacts such as pendants, boatstones and bannerstones (beautifully shaped weights for atlatls), tubular beads, and tubular pipes provide entirely new traits.) Probably canoe transportation and domestic dogs were spread over most of America in this stage. Dwellings must have been rude brush shelters, perhaps covered with mats or skins in some areas, or simple lean-tos; but being easily built of light poles and sticks, evidence of them is practically im-
possible to find archeologically. Generally speaking, the
dead were buried in flexed position and without offerings
except for personal adornments left on the bodies. There
are notable exceptions, as in California, where whole ceme-
teries have been found with bodies extended; but whether
flexed or extended, they were accompanied by numerous
offerings.

The Texas Archaic remains fit into this generalized
picture, but there are important differences within the State.
The East Texas material is closely connected with that of
the Eastern United States as a whole; Trans-Pecos Texas
shows connections with the Southwest; Southwest Texas
with northeastern Mexico; and the central part is unique in
some ways. No Archaic Stage has yet been defined in the
Panhandle and South Plains. North-Central Texas shows
blends of artifact types in Central and East Texas.

In western New Mexico and southern Tamaulipas, per-
haps in other areas yet to be discovered, agriculture was
introduced before the end of Archaic times, as shown by the
discovery of large amounts of primitive races of maize pre-
served in dry cave deposits. Where such preservation is
lacking it is difficult to determine whether agriculture was
present or not, for there were no farming implements of
imperishable nature to provide even indirect evidence. In
Texas, so far as known, no agriculture was practiced before
pottery was made; that is, it belongs in the next or Neo-
American Stage. While the atlatl and dart was the common
weapon of Archaic people everywhere, the bow and arrow
was widely adopted not long after the time of Christ, as
seen in the appearance of small, thin, light stone points over
tremendous areas. In some parts of Texas, such small pro-
jectile points appear somewhat in advance of pottery, which
is to say that, if pottery is the chief criterion for the Neo-
American Stage, the bow and arrow must have appeared
before the end of Archaic times. However, it was a recent
acquisition in terms of the several thousand years that the
Archaic Stage must have lasted in Texas as well as else-
where. Its beginning may be estimated at between 4000
and 3000 B.C., and its end somewhere between 0 and 1000 A.D., depending upon the time of appearance of pottery in different parts of Texas.

3. The Neo-American Stage includes cultural manifestations which possessed pottery (whether made locally or acquired by trade); small, light arrow points; and agriculture of a more developed nature than that of the late Archaic Stage. Usually a still greater refinement of artifacts accompanies these traits; houses were often large and well built, located in permanent settlements; earthworks were erected for ceremonial purposes in the Eastern United States (including East Texas); ceremonial objects used in rituals, dances, prayers, and sacrifices appear; some sites were quite large and became ceremonial or trading centers; and withal a level of cultural development was reached in some regions which may be called civilization (which, literally, means life in cities, with specialization of labor and social stratification). Arts and crafts were more highly developed than before, due to greater security of food supply and more leisure time. Not only was pottery one of the world's great inventions, but some Indian groups exercised a great deal of ingenuity in creating new and pleasing forms and design conceptions as this stage went on.

In Texas archeology we have several anomalous situations in which it is difficult to assign a particular complex to a late phase of the Archaic Stage or to the Neo-American. That is, they do not show, as yet, clear evidence of whether the three institutions—pottery-making, agriculture, and bow and arrow—appeared simultaneously or with some time differentials between them. We have done about all that could be done under the circumstances—placed the cultural units in a Neo-American Stage if they showed the presence of any two of these three developments. Future research may prove these decisions wrong in some cases; in most, they should be confirmed and amplified.

4. The Historic Stage is used to embrace all remains associated with objects of European or modern American
origin, such as metal, glass, porcelain, etc. The presence of such tangible objects is the only practical way we have of proving that a given archeological complex belongs to a time of contact (direct or indirect) with members of the white race. This, however, was seldom the first such contact, for many of the earlier explorers passed through certain areas, meeting and conversing with the Indians, obtaining food and travel directions from them, claiming the area in the name of their King, and so on, but leaving practically nothing among them that can be recovered by archeologists. With the establishment of trading posts and missions, trade was carried on with Indians, so that they obtained European articles in some quantity, leaving them about their villages or placing them in graves. Thus, the first contacts made no appreciable effect on native life, and only gradually did sufficient change come about to mark a separate "stage" of culture. Many archeological complexes, although they may have existed after the discovery of America—even as much as two or three centuries after Columbus in some cases—therefore remained in the Neo-American Stage until evidence of white contact can be picked up. As this contact increased, the native Indians abandoned some of their weapons, tools, and utensils, substituting steel arrow points for stone, iron knives and axes for flint and polished stone, glass beads for shell pendants and beads, copper or iron buckets for pottery cooking jars, and so on.

We have discussed the Historic Stage only very briefly in the various sections of Texas, first because such sites are very rare in Texas compared with those of the Archaic and Neo-American Stages, and second, because a great deal of documentary research remains to be done in connecting such sites with specific tribes existing in definite locations during definite dates. Where we have felt that such connections can be made, we have noted the tribal names.

* * * *

It must be pointed out that the above "stages" are of the most general nature. The traits of any stage may and
commonly do continue into the next one. A stage is therefore recognized by the new elements which appear, regardless of how many older ones continue. At the same time, the four stages mark a series of developments in economic evolution, increasing exploitation of the environment for new and more varied foods, increasing population density and size of villages, increasing social stratification and specialization of labor, and—with the exception of the Historic Stage—by increasing development of arts and crafts. In the last stage there was a general breakdown of native culture everywhere, in great part due to the terrible decimations of smallpox, when most tribes lost from half to three-quarters or more of their numbers; in part to the intertribal wars which were fostered and encouraged by the white man in order to help the Indian to destroy himself; in part to the white man's own warfare to take away the Indian's lands; and in part to substitution of the white man's weapons, tools, and utensils for those of native origin.

Furthermore, each stage may have begun at a different time in one area from that in another. The Neo-American Stage, for example, probably began at different times in Texas, according to the source of the influences which brought agriculture, pottery-making, and bow and arrow, not to mention the many other traits which accompanied these three in the course of normal diffusion. Thus, the Neo-American Stage was instituted in far western Texas by influences from cultures already well established in New Mexico and Chihuahua; in the upper Panhandle from cultures already well established in the Great Plains and northern New Mexico; in North-Central Texas from the Great Plains of Oklahoma and Kansas; in East Texas from the general lower Mississippi Valley region (at least in part), and possibly by migration from the Middle American province. In Central, Coastal and Southwest Texas, agriculture has not been proved present prior to establishment of Spanish missions in the 18th century, when the friars specifically state in several instances that they taught the Indians to plant and irrigate. The origins of arrow-point
styles and ceramics in Central and Coastal Texas have not been traced satisfactorily in any specific direction as yet, except for obvious trade pieces. Thus, even within the boundaries of Texas alone, the onset of a Neo-American Stage may differ by as much as a thousand years in one section or another.

It remains to define certain cultural terms used throughout this work. These are:

**Site:** Any place revealing occupation by human beings. There may have been more than one occupation, superimposed in vertical order, or overlapping horizontally. Sites may be open camps, caves or rock shelters, mounds, pictographs, bedrock mortar holes, or burial areas. Burials may sometimes be isolated, away from an occupation area, and while not technically sites, are evidence of occupation nearby.

**Focus:** One or more sites consistently revealing similar culture traits. These are seldom identical, especially over large areas, but provide complexes of traits which, taken as a whole, are distinct from other such combinations; in other words, they reveal the material-culture remains of similar people living during a limited time span. One focus may change into another in the same area.

**Component:** A site, or part of a site, which reveals the remains of a single focus.

**Aspect:** A grouping of foci which contain a number of culture traits in common, binding them more closely together than with the foci of another aspect. These foci may occupy adjacent areas and be more or less contemporaneous with one another, or they may follow one another in time within the same general area. In some cases there are both horizontal and vertical relationships between the foci of one aspect. A focus may be a mixture of traits, so that it is difficult to place within one aspect or another. This is sometimes "solved" by assigning the focus to one aspect rather than another on the basis of the majority of its traits; however, we
prefer to describe these situations as mixtures rather than to force decisions where they are far from clear.

*Phase:* This has two meanings. In the original McKern or Midwestern System of classifying cultural units, a “Phase” is a grouping of aspects which show important traits in common, in distinction to other such groupings. This process has caused so much difference of opinion among archeologists that it has now been virtually abandoned. The second meaning is that of a slight change in culture which took place during the life-span of a given focus. Thus, one speaks of an “early phase” or a “late phase” of a focus. The authors have used “phase” in this latter sense.

*Pattern:* In the McKern System, a “pattern” is a major cultural division, a grouping of “phases” in the first sense mentioned above. In North America as a whole there would be only a very few patterns: the Archaic would be one (at least in the Eastern United States); the Woodland and Mississippian cultures in the Eastern United States would provide two others; and probably the Puebloan and Hohokam cultures of the Southwest would provide others (in which case the Anasazi and Mogollon would be separate “phases” of the “Puebloan Pattern”).

*Culture:* This is always used loosely by archeologists to embrace almost any kind of complex, from focus to pattern. Probably it should be confined to the largest groupings or conceptions, such as “pattern”. Thus, one may speak of a Woodland, Mississippian, or Puebloan “culture”, within which there are various subdivisions such as aspects and foci.

We present this Introductory Handbook, then, as (1) a general summary of what is fairly well known in Texas archeology, and (2) as a sort of manual which we hope will be used for identifying various culture complexes and individual types of pottery and projectile points in collections everywhere. As such, it is merely a starting point for more intensive and exact research.

ALEX D. KRIEGER,
May 1, 1955
University of Texas.
PART 1

TEXAS CULTURE COMPLEXES

* * *

DISCUSSIONS AND TRAIT LISTS
Map of Texas, showing seven areas into which it has been divided for this study. The divisions are partly geographical, partly cultural. While each culture complex is generally confined to one of these areas, it may be found to extend into one or more of the others.
**TRANS-PECOS AREA**

Little evidence of the Paleo-American Stage in Trans-Pecos Texas has been found, although remains of late Pleistocene fauna have been reported. Lack of data on early occupation of this region is due perhaps to insufficient reconnaissance, and intensive search for Paleo-American sites is likely to be fruitful.

Principally for clarity of presentation, archeological manifestations post-dating the Pleistocene have been divided into two groups. In the western portion of Trans-Pecos Texas from El Paso to the Guadalupe Mountains on the east and southward down the Rio Grande valley to the Rio Conchos are sites either of Puebloan occupation or strongly influenced by Puebloan culture. The southeastern part of Trans-Pecos Texas, much less influenced by Puebloan culture, includes the Big Bend region and lower Pecos River drainage. Virtually nothing is known of the remainder of the Pecos River valley in Texas and the area east of the Guadalupe Mountains. The following chart lists and aligns chronologically the complexes in the western and southeastern portions of Trans-Pecos.

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In south-central New Mexico, northwestern Texas, and the adjacent portion of Chihuahua are sites of the Jornada Branch of the Mogollon—a cultural sequence of relatively long duration defined by Donald J. Lehmer (1948). The Jornada Branch has been traced through a developmental sequence beginning with a late Archaic phase¹ (Hueco) and progressing through a series of successive phases (Mesilla, Dona Ana, and El Paso) of the Neo-American Stage. The pottery and house structures of the Jornada Branch clearly indicate that this Branch is a southward extension of Puebloan culture. We include Mogollon in the general term "Puebloan culture".

Beginning with the Mesilla Phase there is an expansion southward down the Rio Grande valley by sedentary agriculturalists of the Jornada Branch. Between A. D. 1100 and A. D. 1400 many farming villages of the Dona Ana and El Paso Phases were established in the Rio Grande valley, reaching at least as far south as the head of El Cajon, a canyon located about 125 miles down the Rio Grande from El Paso (Kelley, 1952, p. 361). Possibly because of unfavorable climatic factors and/or raids by nomadic groups, the entire area occupied by Jornada peoples was suddenly abandoned shortly after A. D. 1400.

Archeological remains of the Neo-American and Historic Stages in the Rio Grande valley south of El Cajon have been grouped into the Bravo Valley Aspect (Kelley, et al, 1940). The Bravo Valley people were sedentary agriculturalists and their culture seems to have been a marginal manifestation of the Jornada Branch and related traditions of the Southwest, with an admixture of traits which may have been derived from a local Archaic and/or diffused from areas to the north and east. La Junta, the earliest of the Bravo Valley foci, is entirely prehistoric (being dated at A. D. 1200-1400) and has evidence of a close relationship

¹. The term "phase" is here roughly equivalent to a "focus" of the McKern classification system, but since "phase" is more commonly used in Southwestern classification it is retained for complexes which represent extensions of Puebloan culture.
Trans-Pecos Area

with the Jornada Branch, particularly the El Paso Phase. The Concepción Focus which seems to have developed out of the La Junta Focus extends into historic times, thus bridging the Neo-American and Historic Stages.

Contacts with Western European culture, begun in the late 16th century with the Spanish explorations and continued to the present time, ushered in the Historic Stage and resulted in accretions to the aboriginal culture. The four latest foci of the Bravo Valley Aspect trace this development by gradual stages, from the purely native culture of the early Concepción Focus through the Conchos and Alamito Foci to the present day population, termed Presidio Focus.

Southeastern Trans-Pecos Texas

In the southeastern portion of Trans-Pecos Texas, the Archaic Stage is represented by three poorly known lithic complexes and the Big Bend Aspect. Indications of a relatively early appearance of the Archaic Stage in this portion of Texas consists of the Maravillas and Santiago complexes. A third lithic complex, the Red Bluff, is included in this group, but the temporal relationship of the Red Bluff to the Maravillas, Santiago, and other Archaic complexes is not known. Present data pertaining to these three complexes are extremely scarce, however, and no accurate statements regarding artifact inventories or distributions are possible at this time.

Two foci, Pecos River and Chisos, have been recognized as comprising the Big Bend Aspect. The Pecos River Focus is known principally from a number of excavated rock-shelters in the vicinity of the lower Pecos River, although components have been reported as far west as the Big Bend region. Lithic artifacts, particularly dart point types, suggest that affiliations of the Pecos River Focus lie predominately with the Edwards Plateau Aspect to the east. Known Chisos Focus components are located in mountainous areas west of the Pecos. Chisos Focus is essentially an Archaic complex, like the Pecos River Focus, but stratigraphic evi-
dence and the occurrence of intrusive pottery (which could hardly have been acquired before A. D. 1200) in the upper levels of Chisos components indicate that it is later, at least in part, than the Pecos River Focus. Broad similarities between Chisos Focus and Archaic complexes to the west, notably with the Hueco Phase, have been observed.

Little is known about the Neo-American Stage in the southeastern portion of Trans-Pecos Texas, the only complex which has been recognized thus far being the Livermore Focus. This focus, however, is known from only one occupational site, a component near Alpine which has an admixture of Chisos Focus material (Kelley, et al, 1940, p. 87). Detailed descriptions and accurate cultural and temporal placement of the Livermore Focus must await further research. Additional work will probably result in the recognition of other Neo-American complexes in this portion of Texas.

In historic times, from the 16th century on, large portions of Trans-Pecos Texas were inhabited by nomadic hunting tribes such as Apaches and Tobosos. Virtually no archeological remains have been attributed to them, but a few crevice burials and pictographs showing horses and guns probably should be. The Jumanos, Sumas, and Chisos tribes were found to be settled agriculturalists along the Rio Grande and Conchos Rivers by 16th century Spanish explorers and are thus involved in the development of the Bravo Valley Aspect; other members of these tribes, away from the large and fertile valleys, probably were nomadic hunters. Little has been published on these tribes and their cultures to clarify the historic archeological picture.

Broad historical developments in Trans-Pecos Texas are fairly clear, but many details cannot be accurately filled in at present. Carefully controlled excavations with particular attention to the stratigraphic distribution of artifacts are vital to the solution of most current problems. In general, there are two lines of investigation of prime importance: (1) more accurate determination of focal artifact
inventories, and (2) relationships of one complex to another, both in time and space.

PALEO-AMERICAN STAGE

No sites of the Paleo-American Stage, nor any artifacts which can be attributed to this stage have been reported in Trans-Pecos Texas. Extensive reconnaissance in Pleistocene deposits may, however, uncover evidence of an early occupation in this portion of Texas.

WESTERN TRANS-PECOS AREA

ARCHAIC STAGE

Hueco Phase

This phase was first described systematically by E. B. Sayles (1935) who termed it the Hueco Cave Dweller, to distinguish it from the Big Bend (now Chisos Focus) and Pecos River (now Pecos River Focus) Cave Dwellers. In general, subsequent work of C. B. Cosgrove and Donald J. Lehmer has supported Sayles' three-fold division, although a comprehensive comparison of these "Cave Dwellers" is badly needed. Sharing of traits is most evident in basketry, matting, wooden utensils, and other artifacts of a perishable nature. Actually the problem is a far-reaching one, for it involves similar material found over a large portion of the western United States.

The Hueco Phase, like other early branches, of the Mogollon, seems to have developed out of the widely distributed "Cochise Culture". During the latter portion of its existence, the Hueco Phase received pottery from peoples to the northwest and gradually developed and differentiated into the Mesilla Phase and the closely related Capitan Phase of southeastern New Mexico.

COMPONENTS:

Type Component: None designated.
Principal Excavated Components: Several sites excavated by the Peabody Museum in the southern portion New Mexico and neighboring regions of Texas
(Cosgrove, 1947); sites in Culberson County (Jackson, 1937); William Cave, Culberson County (Ayer, 1936); Ceremonial Cave near El Paso (Alves, 1930); and an unnamed cave near Toyah, Texas (Sayles, 1941).

TYPES OF SITES:

Rockshelters, caves, and open campsites; areas of occupation often indicated by accumulations of burned rock.

HOUSES:

No data.

LIVELIHOOD:

Hunting of small game, deer, and antelope; gathering of wild plant products (cacti, mesquite beans, sotol, agarita berries, grass and yucca seeds, and fibrous stalks such as agave and lechuguilla); some cultivation of corn and squash in the latest stages (there is a possibility that cotton was also grown).

STORAGE PITS:

Pits found in rockshelters may have been used for storage.

CERAMIC TRAITS:

A late accretion to the complex is a plain brown pottery, with sand or coarser material for tempering. Pottery seems to have been derived from peoples to the northwest of the Hueco area.

CHIPPED STONE ARTIFACTS (not abundant):

Projectile Points (no type names designated):
Arrow Points: Described by Sayles (1935) as thin, fine-pointed, with long stem; also square-shouldered; broad base.

Dart Points: Long blade, round base and deep side notches; another form with broad base, side notches, and indented base.
Scrappers: Core with one end retouched into concave base; and flakes retouched along a straight or slightly concave edge.

Handaxes: Present.
Knives: Leaf-shaped.
Drills: Shaft finely chipped with rounded base.

ARTIFACTS OF GROUND STONE:
Mortar holes: Deep and cylindrical with rounded bottoms, found in boulders and rock outcrops.
Pestles: Long and tapering.
Milling stones: Flat or oval depressions.
Manos: One-hand, circular to oval in outline shapes with one or both faces used, and flat, convex, or occasionally wedge-shaped in cross section.

ARTIFACTS OF POLISHED STONE:
Stone beads and pendants.

ARTIFACTS OF BONE:
Awls made from split metatarus of deer.
Flaking tools.

ARTIFACTS OF SHELL:
Disc and tubular shaped beads.
Olivella beads.
Bracelets and pendants made from Glycymeris (?)..

ARTIFACTS OF WOOD AND CANE:
Atlatl.
Notched cane dart with pointed wooden foreshaft.
Flat, grooved club, sometimes bound with skin (these have been called rabbit sticks, fending sticks, and boomerangs).
Fireboard of split yucca stalk.
Bow fire drill.
Planting or digging stick.
Notched rasping stick.
Miscellaneous pointed and battered sticks.
Fiber bundles tied to yucca stalk.
Carved *pahos* (prayer-sticks) with iridescent feathers.
Split stick awl with sharpened end and looped handle bound with fiber.
Cane cigarette.
Section of cane with small holes burned in row lengthwise (flute?).

ARTIFACTS OF SKIN:

Dog and fox skin bags.
Antelope skin pouches.
Rabbit fur blankets.
Miscellaneous fragments of tanned skin, occasionally with stretching holes tied with fiber.

ARTIFACTS OF FIBER:

Basketry: Fiber-cord twined; coiled with grass foundation, yucca-leaf sewing element, split-stitch; and yucca-leaf warp, threaded with fiber cord.
Matting: Yucca-leaf, checkerboard twill; yucca-leaf, fiber cord twined; and thick twist of yucca fiber, cord-twined.
Cordage: Fiber 1, 2, and 4-strand; human hair, 2-strand.
Sandals: Squared toe: Frames of lechuguilla, sotol or yucca leaves; braided with same material, and reinforced with strands interwoven lengthwise. Ends of all elements on sole side.
Squared toe: 4-warp.
Rounded toe: Frames of yucca leaves, crossed toe and heel, and braided with same kind of material ("fish-tail" sandal).
Rounded toe: Frame of yucca or lechuguilla leaves, elements twisted at toe and heel, and braided with same kind of material.
Yucca-leaf awls.
Bundles of yucca leaves.
Plain weave, of cotton.

MISCELLANEOUS TRAITS:

Gourd vessels.
Pigments.
Pictographs: Conventionalized figures drawn in lines and dots; colors of red, orange, black, and yellow.
Hammerstones.
Incised lines on boulders and rock outcrops in shelters, probably identical to the grooved, polished areas in Big Bend Aspect sites.

BURIAL CUSTOMS:

Adult: In shelters, flexed and wrapped in rabbit-fur blankets tied with human-hair cord. Burial offerings include ornaments, matting and basketry.
Infant: In shelters, in fiber-cord twined conical basket, built on wood and yucca-stalk frame, with lechuguilla-leaf tumpline. Offerings include pahos, bags, and miscellaneous tanned skins and down; cotton and human-hair cord, hanks of human hair, ornaments, rabbit-fur robes, and matting.

RELATIONS:

Olivella shells from Gulf of California or Pacific Ocean.
A number of traits common to Chisos Focus and, to a lesser extent, the Pecos River Focus.
Pottery from San Marcial Phase of the Mogollon in south-central New Mexico.

ESTIMATED AGE:

? to A. D. 900 (Lehmer, 1948, p. 89).

SOURCES:

Alves, 1930; Ayer, 1936; Cosgrove, 1947; Jackson, 1937; Lehmer, 1948; Sayles, 1935, 1941.
NEO-AMERICAN STAGE
Mesilla Phase

The incipient development of the Neo-American Stage began in the latter part of the Hueco Phase, as evidenced by the appearance of agriculture and small quantities of pottery. These new traits spread in popularity and were supplemented by other innovations so that a Neo-American complex, termed the Mesilla Phase, gradually emerged out of the old Archaic pattern of the Hueco Phase.

Sites of the Mesilla Phase, which contain pit houses and an abundance of pottery, are known from surface collections in southeastern New Mexico and the adjacent portion of Texas, and from work at Los Tules, the principal excavated component. The following characterization of the Mesilla Phase is based mainly upon Lehmer's list of traits at Los Tules (Lehmer, 1948, pp. 13-34).

COMPONENTS:

Type Component: Los Tules Site, on the Rio Grande just above the Mesilla Dam, excavated in 1940 by the Arizona State Museum and the Museum of New Mexico, under the direction of Donald J. Lehmer.

Excavated Components: At the La Cueva Site, near Las Cruces, New Mexico, El Paso Brown pottery found in the lower levels of a test pit suggest an occupation by the Mesilla Phase.

TYPES OF SITES:

Villages of small pithouses, with refuse scattered over the site.

HOUSES:

Pithouses varying considerably in depth. Unaltered bottom of the pit served as the floor; pit walls not plastered except in one instance. Superstructure probably made of poles laid on heavier framework and covered with grass thatch. The houses can be divided into two types, circular and rectangular. Fea-
tures of rectangular houses include sloping entrance, leading from east or southeast; and main roof supports in the corners and at the centers of the shorter sides. Posts at the ends of the long axis suggest a central beam which formed the ridgepole of a peaked roof. As a group, the rectangular houses are smaller than the circular ones.

Circular houses are characterized by the absence of any trace of a doorway (a hatchway may have been used as an entrance); primary interior roof supports in the center, so the walls sloped in from the rim of the pit to the roof. Fire areas occur consistently in rectangular houses but rarely in circular ones. One circular pithouse at the Los Tules Site was exceptionally deep, with a bench 45 cm. wide encircling the wall 1 meter above the floor. There was an unusual posthole arrangement, suggesting that this particular structure may have served a different purpose from the other circular pithouses.

STORAGE PITS:

Located inside and outside the houses; shapes of pits are oval, circular or irregular. Circular and oval pits are undercut, while irregular pits have straight sides. Depths range from 30 to 75 cm.; width across opening range from 43 to 75 cm. Pits contain refuse.

LIVELIHOOD:

Agriculture inferred, supplemented by hunting and gathering.

CERAMIC TRAITS:

Pottery Types: *El Paso Brown*.

Temper: Angular fragments of limestone and quartz.

Decoration: Typically undecorated; very rarely sherds have black or red painted design, foreshadowing the development of *El Paso Polychrome*. Oc-
casionally shreds show gouging, punching, and incising.

Forms: Jars without necks, and rarely bowls.
Scraping tools made from potsherds.

OTHER ARTIFACTS OF CHIPPED STONE (uncommon):

Projectile Points:

Arrow Points (no named types): Long, thin, slender triangular points, with straight and concave bases; also triangular points with side notches and expanding stem with concave base.

Dart Points: Possibly carry-overs from the Hueco Phase.

Knives: Oval, percussion-chipped.
Scrapers: Side (not as frequent as sherd scrapers).

ARTIFACTS OF GROUND STONE:

Manos: One-hand, predominantly round or oval in outline shape, with convex and straight faces and rarely a distinct pit on one face; occasionally wedge-shaped.

Milling stones: Oval basin, trough and flat basin.
Pestles.
Mortars in boulders and rock outcrops.
Stone bowls with incised decorations.

ARTIFACTS OF POLISHED STONE:

Turquoise, polished and perforated for suspension.
Incised pendants.

ARTIFACTS OF BONE:

Awls made from splinters.
Ring made by perforating a disc; another type made from transverse segments of long bone of some large animal.

ARTIFACTS OF SHELL:

Bracelets of Glycymeris.
Beads of *Olivella* shells.
Pendants made from broken segments of *Glycymeris*.

**BURIAL CUSTOMS:**

Flexed, reclining position; occasionally pottery as offering. Burials usually in abandoned house floors and in refuse areas.

**RELATIONS:**

Intrusive pottery from the Mimbres Phase, including types *Mimbres Black-on-white*, *Mimbres Corrugated*, *San Francisco Red*, and *Alma Plain*.


**ESTIMATED AGE:**

A. D. 900-1100 (Lehmer, 1948, p. 89).

**SOURCES:**

Lehmer, 1948.

**Dona Ana Phase**

The short-lived Dona Ana Phase is transitional between the Mesilla and El Paso Phases. The persistence of pit-houses and *El Paso Brown* pottery indicate a direct linear descent from the Mesilla Phase. Such traits as surface houses and painted pottery were evidently borrowed from *Añasazi* groups to the north and from the Mimbres people already in the Jornada area to the west (Lehmer, 1948, pp. 78-80).

Expansion of the Jornada Branch down the Rio Grande valley, begun during the Mesilla Phase, was continued in Dona Ana times (Kelley, 1952, p. 361). Cultural relations also extended over a wider area than in the earlier phases of the Jornada Branch, for intrusive pottery types furnish evidence of contact with the Zuñi district, and the *Mimbres*, *Three Rivers*, and *Cedarvale* Phases.
Since no Dona Ana sites have been excavated, this phase is known solely from surface collections, which consist almost entirely of pottery.

COMPONENTS:
None excavated; however test pits at the La Cueva Site, near Las Cruces, New Mexico, indicate that a Dona Ana occupation succeeded the Mesilla Phase at that site.

TYPES OF SITES:
Appear to be small villages composed of pithouses and surface structures.

HOUSES:
Pithouses and adobe-walled surface structures with contiguous rooms.

LIVELIHOOD:
Probably same as Mesilla Phase.

CERAMIC TRAITS:
Pottery types: *El Paso Brown* (similar to Mesilla Phase with modification of rim), and *El Paso Polychrome*.

ARTIFACTS OF GROUND STONE:
Arrow-shaft tools: Straighteners and abraders.

RELATIONS:
*St. Johns Polychrome* and *Houck Polychrome* from the Zuñi district of New Mexico.

*Three Rivers Red-on-terracotta* and *Broad-line Red-on-terracotta* from the Three Rivers Phase of the Jornada Branch, northern variant.

*Mimbres Classic Black-on-white, San Francisco Red, Alma Plain, Mimbres Corrugated* from the Mimbres area in southwestern New Mexico.

*Chupadero Black-on-white* from the Cedarvale Phase.

ESTIMATED AGE:
A. D. 1100-1200 (Lehmer, 1948, p. 89).

SOURCES:
Kelley, 1952; Lehmer, 1948.
El Paso Phase

At about A.D. 1100, influences from the Anasazi or northern division of the Puebloan culture\textsuperscript{1} began to be felt by peoples of the southern or Mogollon division—more specifically, by the Jornada Branch with which we are here concerned. Many of the older cultural patterns were now markedly altered. Although the reasons are not clear, a number of population movements are evident in the Southwest during the 12th and 13th centuries.

The El Paso Phase appears to be the result of such movements or influences extending down the Rio Grande valley in southern New Mexico and western Texas. The phase was first defined by Sayles (1935) and later supplemented by the work of Mrs. Glen E. Moore (1947) and Donald J. Lehmer (1948). The artifacts are derived directly from the Dona Ana Phase, with a few changes and additions.

A southward expansion, probably initiated during the Mesilla Phase, was continued by agriculturalists of the El Paso Phase, who established villages on alluvial terraces along the Rio Grande. This Puebloan-derived culture spread as far south as the Presidio vicinity at the Rio Conchos entry, and perhaps up the Conchos from there. In the Presidio area the La Junta Focus of the Bravo Valley Aspect represents this southward thrust; however, the Bravo Valley Aspect itself represents a distinct cultural development which only borrowed part of the Puebloan traits of the Jornada Branch, particularly of the El Paso Phase.

Shortly after A.D. 1400, the El Paso Phase seems to have disappeared rather suddenly. Climatic changes may have forced migration to other regions, or the pressure of nomadic invaders may have been responsible. Perhaps both factors operated. A similar situation obtained widely in the Southwest at about this time, for reasons which warrant close study.

\textsuperscript{1} We use “Puebloan” here in the same sense as Reed (1946, 1952). The Anasazi is the northern division of this great culture pattern, from Basket Maker times to the present. The Mogollon is the southern division, beginning by about B.C. 400 or 300, and continuing until 1400 or 1450, by which time the whole southern region was practically abandoned by agricultural Indians. Presumably the nomadic invaders from the north, mainly the Apache tribes, were responsible for much of this abandonment for they were found in possession by the early Spanish explorers.
COMPONENTS:
Type Component: The Bradfield Site in the lower Tulareosa Basin, excavated in 1940 by the Arizona State Museum and Museum of New Mexico, under the direction of Donald J. Lehmer.
Principal Excavated Components: Twelve Room House Ruin, near El Paso, Texas (Moore, 1947); Alamagordo Site I and II, both near Alamagordo, New Mexico (Lehmer, 1948).

TYPES OF SITES:
Villages, consisting of multi-roomed, one-story pueblos. Refuse middens and ruins mark the sites.

HOUSES:
Surface structures with adobe walls. Two characteristic ground plans: (1) rooms grouped around plazas and (2) long tiers of rooms oriented east and west.
Interior features include fire pits, storage pits with straight walls (often irregular in outline), and post holes. Floors are of adobe and rooms may or may not have doorways. Adobe "altars", similar to those of the La Junta Focus, are found only in the southern portion of the El Paso Phase region.

STORAGE PITS:
See above.

LIVELIHOOD:
By inference, same as in earlier phases.

CERAMIC TRAITS:
Pottery type: El Paso Polychrome.
Temper: Sand.
Forms: Jars and bowls.
Decoration: Usually black over red, red over black, black and red on brown base; design rather crude, alternate lines of black and red, massed colors, and stepped motifs. Infrequently, textured shreds of same paste as polychrome; include incising and punctating.
Animal effigies.
Tubular pipes.
Sherd discs, perforated or unperforated.
Potsherds used as scrapers.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:
  Arrow Points (no named types): Small, thin, triangular forms; bases straight, concave or convex.
  Dart Points: No data.

Drills: Long, tapering shaft and expanding base.

Scrapers: Keel-backed, end scrapers; side scrapers.

Gravers: Present.

ARTIFACTS OF GROUND STONE:

Tubular pipes.

Mauls.

Manos: Oval, one-hand; more frequently, two-hand manos with only one face used.

Milling stones: Flat-surfaced, trough, and oval basin.

Mortars often in boulders and rock outcrops.

Pestles: Long and tapering; also short and cylindrical.

Arrow-shaft tools.

Full-grooved and \( \frac{3}{4} \)-grooved axes, rarely double-bitted.

Stone hoes, roughly triangular, with base sharpened to blunt cutting edge and side notches just below the apex.

Palettes: Tabular pieces of stone.

Polishing stones from waterworn pebbles.

Spherical stone balls.

Grooved picks.

Stone bowls.

ARTIFACTS OF POLISHED STONE:

Animal effigies.

Pendants of turquoise and other stones.

ARTIFACTS OF BONE:

Bone awls.

Antler-prong flaking tools.
ARTIFACTS OF SHELL:
- Tubular and discoidal Olivella beads.
- Beads from an unidentified shell made by drilling transverse hole through spine.
- Bracelets.
- Pendants from shell of bivalve.
- Shell tinklers.

MISCELLANEOUS TRAITS:
- Hammerstones.
- Quartz crystals.
- Pigments.
- Turquoise and malachite fragments.

BURIAL CUSTOMS:
- Flexed, both sitting and reclining positions; sometimes in house floors, but more commonly in village area, probably in refuse heaps. Burial offerings not abundant, consisting mainly of pottery.

RELATIONS:
Intrusive pottery:
- Most common intrusives are: Three Rivers Red-on-terracotta and Lincoln Black-on-white, from San Andres Phase in central New Mexico; and Chupadero Black-on-white from the Cedarvale Phase.
- Gila Polychrome from Animas Phase in Chihuahua.
- Agua Frio Glaze-on-red and Arenal Glaze Polychrome from the Arenal Phase in the central Rio Grande Valley.
- Ramos Polychrome and Playas Red Incised (Ramos Phase in northwestern Chihuahua).
- St. Johns Polychrome and Heshotaauthla Glaze Polychrome from the St. Johns and Heshota Phase of the Zuñi district.

Close contact with the La Junta Focus suggested by El Paso Polychrome in La Junta sites; house types of the La Junta Focus; adobe “altars” which may be a La Junta intrusive in the El Paso Phase.
- Widespread distribution of El Paso Polychrome outside the Jornado area.
Trans-Pecos Area

ESTIMATED AGE:

A. D. 1200-1400 (Lehmer, 1948).

SOURCES:

Kelley, 1952; Lehmer, 1948; Moore, 1947; Sayles, 1935.

Bravo Valley Aspect

Largely through the work of J. Charles Kelley, five foci, La Junta, Concepción, Conchos, Alamito, and Presidio, have been recognized as comprising the Bravo Valley Aspect. This aspect is a marginal manifestation of Puebloan culture which appears to represent local groups who also borrowed a number of traits from their neighbors to the south and west (Kelley, 1952). The earliest focus of the Bravo Valley Aspect, La Junta, was contemporaneous with the El Paso Phase, while other foci of this aspect date from about A. D. 1400 to the present. Only the La Junta Focus is entirely prehistoric, the Concepción having evidence of European contact toward its end. The following period of increasing acculturation of the native culture has been termed the Conchos Focus. Since the Presidio and Alamitos are modern, they will not be considered here.

With respect to the La Junta, Concepción, and Conchos Foci, house styles and pottery types are the main differentiating features; most other traits appear to be shared. To avoid needless repetition the traits common to all three foci will be characterized first, then the traits tentatively assigned to each focus will be listed separately.

COMPONENTS:

Centered in the Rio Grande valley, in the vicinity of Presidio, Texas.

TYPES OF SITES:

Rockshelters and small caves in tuff cliffs; pithouses, often marked by surface depressions and large middens; and surface houses, sometimes indicated by partially standing walls. Villages known, but detailed descriptions lacking.

HOUSES:

Pithouses vary from one focus to another, but were
usually built with walls of jacal construction. Evidence at present seems to indicate that entrance was through the roof.

LIVELIHOOD:
Agriculture (beans, corn, and squash), hunting, fishing, and food-gathering.

CERAMIC TRAITS:
With the exception of the pottery types from the Southwest, there are as yet no published descriptions of the Bravo Valley Aspect pottery. Undescribed types include Pulicos Red-on-Brown, Chinati Plain Ware, Capote Red-on-brown, and Paloma Red-on-gray.

Ovals and discs cut from potsherds, both perforated and unperforated.

ARTIFACTS OF CHIPPED STONE:
Projectile Points:
Arrow Points: Perdiz, Piedras, Shafter, and Fresno.

Dart Points: Absent.

Handaxes: Crudely chipped.

Scrapers: Finely made snub-nosed or thumb-nail scrapers; side scrapers; small flakes carefully chipped to straight, concave, and convex cutting edges.

Drills: Small, carefully chipped, shaft oval in cross-section, no base.

Small flakes with chipped saw-tooth edges.

Knives: Diamond-shaped with alternately bevelled edges. Also well-chipped plain knives.

Sinkerstones: Made from small to medium-sized river pebbles; oval, rectangular or circular in shape; notches chipped in ends; occasionally marks of wear on faces of pebbles between grooves.

ARTIFACTS OF GROUND STONE:
Grinding implements: Large basin-shaped, oval-bowl metates; and shallow trough-like, oval-bowl metates.

Manos: One-hand, convex and flat grinding surfaces, rectangular in outline with rounded corners, carefully shaped; also unshaped manos.
Pestles: Both shaped and unshaped, cylindrical, and rod-like.
Arrowshaft smoothers, abraders or straighteners.
Small boulders with shallow rectangular grinding basins cut in face, sometimes marks of red pigment in basin (paint mortars).
Small to medium-sized polishing stones having facets from usage, or scratches on one or more sides.

ARTIFACTS OF POLISHED STONE:
No data.

ARTIFACTS OF FIBRE:
Some reported, but detailed descriptions not available.

ARTIFACTS OF BONE AND ANTLER:
Awls and flaking tools of bone.
Bone needles and spatulas.
Tubular bone beads, often decorated with incisions.

ARTIFACTS OF SHELL:
Pendants, beads, gorgets, “buttons”, discs, and problematical forms made from fresh-water mussel; also *Olivella* shells and others from the Gulf of Mexico and Gulf of California.

MISCELLANEOUS:
Red pigment.
Hammerstones.

BURIAL CUSTOMS:
Usually flexed inhumation, with or without offerings.

RELATIONS:
Varies from one focus to another, but in general reflect contact with the Southwest, as evidenced by the intrusive pottery types and architecture (see Jornada Branch of the Mogollon).

ESTIMATED AGE:
A. D. 1200-1800 (1800 is terminal date suggested for Conchos Focus; Kelley, et al., 1940, p. 163).
Texas Archeological Society

SOURCES:
Kelley, Campbell, and Lehmer, 1940; Kelley, 1939, 1949, 1951a, 1952; Sayles, 1935, 1936; and Shackelford, 1951.

La Junta Focus

COMPONENTS:
Type Component: Early horizon at Shafter 7:1 (Milton Site), near Presidio, Texas (Kelley, et al., 1940).
Other Components: Loma Seca, near the Rio Conchos in northern Chihuahua, Mexico; Shafter 7:6, Shafter 8:1, Shafter 8:3, Ruidoso 6:3, Ruidoso 6:2 in the Big Bend (Kelley, et al., 1940); and the Polvo Site (57D2-3) near Redford, Texas (Kelley, 1949; Shackelford, 1951).

HOUSES:
Small, shallow, circular or oval pithouses.
Rectangular rooms in shallow pits with adobe-base walls and jacal superstructure; built in series of two to five rooms.
Rectangular houses built in deep pits, with or without low adobe curb; jacal superstructure. Walls of houses built inside the pit and usually unplastered. However, at the Polvo Site decorations consisting of bands of yellow, black, red, and perhaps white were painted on plastered walls. Also at the Polvo Site, "turtle-back" bricks, laid up longitudinally and plastered together, were used in wall construction.
Rectangular blocks of adobe set with long axis flush with the south interior wall of rectangular houses. These "altars" are plastered, well-made, about 30x60 cm. and 30 or 40 cm. in height, and show no signs of usage. Roof supports present in all houses, with considerable variation.

CERAMIC TRAITS:
Types: El Paso Polychrome, Chihuahua Polychromes (Ramos, Babicora and Villa Ahumada), Tusayan
Polychrome, Playas Red, Chupadero Black-on-white, and unnamed red and brown wares. Present evidence suggests that the preceding pottery types are trade wares, and that locally made pottery is rare or absent; yet these wares are consistently associated and seem to warrant listing as part of the cultural complex.

ARTIFACTS OF GROUND STONE:
Small and medium-sized bowls carved from volcanic tuff, round, oval, and irregular in shape; occasionally these occur with curvilinear designs carved on the exterior.

BURIAL CUSTOMS:
Flexed inhumation of infants and, to a lesser extent, adults; placed below house floors.

ESTIMATED AGE:
A. D. 1200-1400 (Kelley, et al., 1940).

SOURCES:
Kelley, Campbell, and Lehmer, 1940; Kelley, 1939, 1949, 1951a; Shackelford, 1951.

HISTORIC STAGE
Concepción Focus

COMPONENTS:
Type Component: Shafter 7:3, near Presidio, Texas (Kelley, et al., 1940).
Other Components: Shafter 7:1 (upper component), Shafter 7:6, Shafter 8:1, Ruidoso 6:2 (Kelley, et al., 1940; Kelley, 1939).

HOUSES
Large rectangular pithouses, averaging about 28x30 feet; no adobe used, walls and roof of jacal structure. Entrance probably through roof. Interior features include row of wall posts along inside of pit; main roof supports forming rectangle in pit. Occur singly or in series of three to seven.
Large circular pithouses, probably with jacal walls and roof (association with focus uncertain).

STORAGE PITS:
- Pits with prepared clay floors, dug into alluvium near houses; interior support of sapling poles around circumference.

CERAMIC TRAITS:
- Pottery types: Chinati Plain Ware, Capote Red-on-brown, Paloma Red-on-gray. Unnamed polished red and brown ware; and unnamed gray ware.

ARTIFACTS OF GROUND STONE:
- Plain stone bowls (?)
- Rubbed and grooved stones.
- Arrowshaft straighteners or abraders, oval shaped, smoothed surface, transverse groove and one end shouldered (for hafting?).

BURIAL CUSTOMS:
- Flexed inhumation in refuse heaps.

RELATIONS:
- Trade sherds of type Patton Engraved (Allen Focus of the Fulton Aspect). In later phases of the focus, items of European origin.

ESTIMATED AGE:

SOURCES:

Conchos Focus

COMPONENTS:
- Type Component: Shafter 7:1, late horizon, near Presidio, Texas (Kelley, 1939; Kelley, et al., 1940).
- Other Components: Perhaps the upper component at the Polvo Site (Kelley, 1949).

HOUSES:
- Surface houses of adobe and jacal construction.
Large rectangular houses built in pits.

CERAMIC TRAITS:
Types: *Conchos Red-on-brown* and *Pulico Red-on-brown*.
Mexican or Spanish majolica ware and associated Spanish utility wares.
Brown, red, orange, and gray wares. These are often polished, and roughly finished. Thick, coarse paste. Sometimes have grayish-green slip or wash, which grades into a bubbly green glaze; often wheel-turned.

ARTIFACTS OF METAL:
Crude knives, fishhooks, and other artifacts of copper and iron.

BURIAL CUSTOMS:
No data.

RELIATIONS:
Ceramics, metals, and glass of European origin.

ESTIMATED AGE:
A. D. 1700-1800 (Kelley, 1949).

SOURCES:

SOUTHEASTERN TRANS-PECOS AREA

ARCHAIC STAGE

*Early Lithic Complexes of the Big Bend*

To be briefly considered in this group are three lithic complexes, the Maravillas, Santiago, and Red Bluff. Stratigraphic evidence at the Calamity Creek Site in Brewster County (Kelley, et al, 1940, pp. 107-119) indicates that Maravillas is older than the Santiago, but, as yet, the Red Bluff has not been found in any context that clarifies its chronological relationship to the other two. These Archaic complexes are known from only a few projectile points, scrapers, knives, blades and grinding implements. Available data indicate that Maravillas and Santiago antedate the big Bend
Aspect, and thus, are the earliest known archeological manifestations in the Big Bend region. It seems likely, however, that further work in extreme western Texas may find evidence of the Paleo-American Stage, which to date has been notably absent in that region. An accurate interpretation of the Maravillas, Santiago, and Red Bluff complexes will not be possible until additional excavations give a better representation of the artifact assemblage and distribution of these complexes.

SOURCES:
Kelley, et al, 1940.

*Pecos River Focus (Big Bend Aspect)*

The Pecos River Focus is the earliest manifestation of the Big Bend Aspect. This focus is best known and characterized from rockshelter sites, although open campsites are known. The combination of aridity and occurrence of archeological material in rockshelters is conducive to the preservation of such items as clothing, basketry, matting, wooden implements, etc., which do not survive under ordinary circumstances. Consequently, many of the artifacts from these sites provide data on aboriginal technology and enable a fairly accurate cultural reconstruction. Pictographs on the rockshelter walls, while not unique in the Pecos River Focus, are unexceptionally well represented. Many of the pictographs consist of conventionalized human and animal figures.

Similarities between Pecos River and Basketmaker artifacts have been pointed out. While basketry, matting, sandals, and other perishable items are reminiscent of Basketmaker material the resemblance seems to be largely superficial and there is probably little direct relationship between the two complexes. Relationships, especially lithic artifacts, appear to lie to the east with the Edwards Plateau Aspect.

COMPONENTS:
Type Component: Fate Bell Shelter in Val Verde County, Texas; excavated in 1932 by The University of Texas, under the direction of A. T. Jackson (Pearce and Jackson, 1933).
Principal Excavated Components: Murrah Cave (Holden, 1937), Shumla Caves (Martin, 1933), and Eagle Cave (Davenport, 1938) in Val Verde County; component at the Bee Cave Site (Coffin, 1932) and lower level at Alpine 2:7 (Kelley, et al, 1940) in Brewster County. A number of other sites, particularly rockshelters, in Val Verde and Brewster Counties have been located, but, unfortunately many have been disturbed by looters.

TYPES OF SITES:
Rockshelters and open sites; midden deposits often quite deep in both.

HOUSES:
No data.

LIVELIHOOD:
Food-gathering primarily; to a lesser extent hunting and fishing. No evidence of agriculture.

CERAMIC TRAITS:
Absent.

ARTIFACTS OF CHIPPED STONE:
Projectile Points:
Arrow Points: Absent.
Dart Points: Langtry and Shumla most common and diagnostic; Abasolo, Almagre, Bulverde, Ensor, Frio, Marcos, Montell, Nolan, Palmillas, Pandale, Pedernales, and Tortugas well represented; Darl, Ellis, Kinney, Lerma, and Refugio occur infrequently. Bulverde, Montell, Nolan, and Pedernales points poorly made and small compared with same types in Edwards Plateau Aspect; other types very similar in the two areas.
Handaxes: Made by chipping end of pebble to rounded cutting edge; unworked end fits into palm of hand.
Drills: Large and stemmed.
Scrapers: Cores; heavy end scrapers; and flakes with finely retouched straight or curving edge.
Knives: Ovoid and lanceolate forms.
ARTIFACTS OF GROUND STONE:
Milling stones: Slabs with oval basin.
Metates: Flat, thin slabs.
Deep circular, bedrock mortars.
Manos: Both convex and flat faces; pitted manos; wedge-shaped manos.
Unshaped pestles.
Tubular pipe (?)

ARTIFACTS OF SHELL:
Snail-shell beads.
Gorgets and pendants of conch shell and fresh-water mussel.
Olivella beads.

ARTIFACTS OF BONE AND ANTLER:
Bone awls, spatulas, needles, gouges, scrapers, and flaking tools.
Antler flaking tools and gouges.
Whistle, bone.
Tubular bone beads.

ARTIFACTS OF ANIMAL SKIN:
Sewed skins.
Painted skins.
Pouches.
Rabbit-fur cloth, made by wrapping fur around fibre string and weaving the composite yarn into loose cloth.

ARTIFACTS OF WOOD AND CANE:
Atlatl or spear-thrower.
Atlatl darts, composed of mainshaft and foreshaft; foreshaft either pointed or with slit for attachment of projectile point.
“Rabbit clubs” (also called throwing or fending sticks): curved, and often decorated with incised lines.
Cradle: V-shaped frame, small twigs twined into place with cordage form the bed of the cradle.
Fireboard of split yucca.
Fire drill of yucca or lechuguilla stalk.
Wooden scoop-shaped objects.
Sticks with beveled ends.
Cane cigarette.
Battered stakes; pointed sticks; and painted sticks.
*Bow and arrow (association uncertain).

**ARTIFACTS OF FIBRE:**

*Basketry:* Predominantly coiled, with single bundle foundation using interlocking and non-interlocking stitch. Less frequent are coiled basketry with split-stitch; wrapped twined; and plaited diagonal and twilled weaves.

*Sandals:* Made from whole and split yucca leaves, lechuguilla and sotol; rectangular in shape with a squared toe. Usually consist of two opposing warp leaves, or one split leaf forming the two opposing warps, with a weft of braided flat material between the warp elements. Less common is the use of simple flat elements between the two-warp foundation in a criss-cross fashion.

Occasionally, the rounded-toe “fish-tail” shape, apparently a late accretion to the cultural complex.

*Aprons:* Made of two-ply *Apocynum* cord, perhaps with human hair ties.

*Netting:* Woven from fibre and grass cord by a series of loops, slip-knots, and larkshead knots.

*Matting:* Yucca, lechuguilla and sotol leaves, and whole or split cane or reeds served as raw materials. Techniques include diagonal twilling and twining.

Numerous fragments of cordage, knots, and snares.
Wrapped bundles of grass and yucca leaves.
Fishhooks of cactus thorns.

**MISCELLANEOUS:**

*Hammerstones:* Discoidal and globular forms, made from nodules and discarded handaxes.

Flat, stream-worn pebbles with designs painted in red and black.

Pecked and scratched pebbles.

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*Primarily on the basis of studies of pictographs, Kelley (1950) suggests that the bow and arrow should be placed with a more recent cultural stage than the full Pecos River Focus.*
End-notched pebbles (so-called “net-sinkers”).
Pictographs on shelter walls and on cliffs near shelters;
paintings in red, yellow, orange, and black.
Petroglyphs on cave walls.
Miscellaneous incised grooves on boulders and rock outcrops, rock well polished over and around the grooves.

BURIAL CUSTOMS:
Placed flexed in rockshelters and in open ground. Burials often wrapped in matting, animal skins or woven bags; offerings of weapons, food, tools, ornaments, and basketry. Less common method of disposal was cremation, the calcined bones and ashes being placed in woven bags.

RELATIONS:
All dart-point types except Langtry and Shumla also common in Edwards Plateau Aspect, Central Texas; Langtry and Shumla points occur occasionally in Central Texas and down Rio Grande valley to Falcón Focus in Southwest Texas. Abasolo, Almagre, Tortugas, Kinney, Lerma, and Refugio points also occur in Coastal and Southwest Texas, and Tamaulipas in northeastern Mexico, in the Archaic Stage.

ESTIMATED AGE:
A. D.?–900 (Kelley, et. al., 1940, pp. 158–163).

SOURCES:
Coffin, 1932; Davenport, 1938; Holden, 1937; Jackson, 1938; Kelley, Campbell, and Lehmer, 1940; Kelley, 1950; Kirkland, 1937, 1939; Martin, 1933; Pearce and Jackson, 1933; Sayles, 1935; Setzler, 1935; Smith, 1932, 1940; Taylor, 1949.

Chisos Focus (Big Bend Aspect)

Centered in the mountainous Big Bend Region of Texas are many sites of the Chisos Focus. Like the Pecos River Focus, it is best known and characterized from rockshelter occupations, although Chisos components have been found in open campsites.
Many traits of the Chisos Focus are shared with the Hueco Phase of the Jornada Branch to the north and west and, to a lesser extent, with the Pecos River Focus to the east. The Chisos Focus appears to be roughly contemporaneous with the Hueco Phase and, despite a slight time overlap, later than the Pecos River Focus. Although it is essentially an Archaic complex, intrusive Southwestern pottery types, evidence of agriculture, and possibly the bow and arrow occur in the upper levels of Chisos components, suggesting that in the later part of this focus there were contacts with Neo-American groups to the northwest.

COMPONENTS:
Type component: Muller Rockshelter, excavated by Victor J. Smith in cooperation with Gila Pueblo, Globe, Arizona (Kelley, et. al., 1940).
Principal excavated components: Located in the Big Bend area, Alpine 2:5, Alpine 2:7 (upper level, with Livermore admixture), Sentinel Canyon Shelter (Kelley, et al., 1940); and Bee Cave Site in Brewster County (Coffin, 1932).

TYPES OF SITES:
Rockshelters and open campsites; occupation often indicated by midden deposits.

LIVELIHOOD:
Food-gathering, hunting, and agriculture. Direct evidence of agriculture (corn, squash, and beans) in the latest (?) sites.

CERAMIC TRAITS:
Indigenous pottery probably absent.
Perhaps clay figurines; association uncertain.

ARTIFACTS OF CHIPPED STONE (uncommon):
Projectile Points:
Arrow points: Occasionally types associated with the Bravo Valley Aspect occur, probably as intrusives.
Dart points: Dominant type Paisano; possibly other types.
Drills: Large and stemmed.
Scrapers: Poorly made side scrapers; crude end scrapers.
Knives: Well-chipped blades, uncommon.

ARTIFACTS OF POLISHED STONE:
No data.

ARTIFACTS OF GROUND STONE:
Crude disc-shaped beads.
Milling stones: Oval bowl.
Metates: Flat slab.
Deep, cylindrical bedrock mortars.
Manos: Both convex and flat-surface manos; also wedge-shaped and pitted manos.

ARTIFACTS OF SHELL:
No data.

ARTIFACTS OF BONE:
Awls made from split metarsus of deer.

ARTIFACTS OF SKIN:
Sewed skins, occasionally painted.
Rabbit fur cloth or blankets.

ARTIFACTS OF WOOD AND CANE:
Wooden fire tongs, consisting of two halves of split saplings bound together at the proximal ends.
Flat, painted dice (?).
Sticks with feathers and other bits of wood tied to one end with fibre cord (possibly prayer sticks).
Flat, grooved rabbit clubs; often decorated with incised lines.
Atlatl and dart.
Fireboard of split yucca stalk.
Fire drill.
Small sticks with fine points.
Scorched wooden scoop (fire shovel?).

ARTIFACTS OF FIBRE:
Basketry: Most common technique is split-stitch on single-bundle foundation. Minority types include:
Wrapped twined, coiled with single-bundle founda-
tion using interlocking and non-interlocking stitch, and plaited diagonal and twilled weave.

Sandals: Dominant type is rounded toe, "fish-tail" in shape; crossed toe and heel on yucca frame with braided weft, also of yucca leaf. Of less frequent occurrence is the rectangular squared toe sandal, most commonly associated with the Pecos River Focus.

Netting: Of infrequent occurrence.

Matting: Yucca leaf most common raw material; techniques include checkerboard, diagonal twill, and twined.

MISCELLANEOUS TRAITS:
- Pictographs.
- Gourd vessels.
- Hammerstones.

BURIAL CUSTOMS:
- Placed flexed in rockshelters and in open. Burials often wrapped in matting, skins, and woven bags. Occasionally individuals cremated, but not as commonly as in the Pecos River Focus. Burials accompanied by grinding implements, weapons, and ornaments.

RELATIONS:
- Lithic artifacts shared with Livermore Focus.
- Possibly arrow points from the Bravo Valley Aspect.
- El Paso Polychrome and Chupadero Black-on-white trade pottery.

ESTIMATED AGE:

SOURCES:
- Coffin, 1932; Kelley, Campbell, and Lehmer, 1940; Sayles, 1935; Setzler, 1935; and Taylor, 1949.

NEO-AMERICAN STAGE

Livermore Focus

The only known complex in central and southeastern
Trans-Pecos Texas which might be placed in our Neo-American Stage has been called the Livermore Focus. This "focus" is based almost entirely on the presence, in the Davis Mountains area, of a single arrow-point type known as the Livermore point. There is but one excavated component. Another component is not an occupation site, but a large cache of these distinctive points on the top of Mt. Livermore, the highest peak of the Davis Mountains (James, 1930, pp. 8-9).

This complex has as yet no evidence of agriculture or indigenous pottery. Its placement in the Neo-American Stage is therefore a questionable procedure, based entirely on the assumption that there is a distinctive complex dominated by small arrow points. Other stone artifacts, few in number, and trade pottery of El Paso Polychrome appear to show a link with Chisos Focus. Chisos Focus is said to have agricultural products in its "latest" components, and conversely, to have few if any small arrow points. Little sense can be made of such a situation with present information.

It has been suggested that Livermore Focus first appeared while the Pecos River Focus still existed (before 900 A.D.), then continued to co-exist with the Chisos Focus, and finally was succeeded by the Bravo Valley Aspect (Kelley, et al, 1940, p. 163). We fail to see how such a nebulous "focus" can be interpreted as covering such a long time span. It is further suggested that "the Livermore culture" represents an intrusion of Plains hunting people into Trans-Pecos Texas, who might thus have been responsible for the appearance of certain "Plains traits" which appear in the Bravo Valley Aspect (Kelley, 1952, p. 359). The traits are not itemized, nor is it explained why they could not have reached Trans-Pecos Texas by normal diffusion from the southern Plains.

COMPONENTS:

Type component: Alpine 2:7, Brewster County, excavated in 1938 by J. Charles Kelley for the West Texas Historical and Scientific Society.
Other component: A large cache of arrow points on top of Mt. Livermore.

TYPES OF SITES:
Said to be “rockshelters and open campsites”.

HOUSES:
No data.

LIVELIHOOD:
Primarily hunting and food gathering. No evidence of agriculture.

CERAMIC TRAITS:

ARTIFACTS OF CHIPPED STONE:
Projectile points:
  Arrow points: Livermore most common type; perhaps some of Bravo Valley types also associated (?)
  Dart points: Absent (?)
Gravers: Made from disk-shaped flakes with short needle-like points.
Knives: Diamond-shaped with four bevels. Oval and triangular knives possibly associated.
Scrapers: Flakes retouched on one or both sides; and small, finely made snub-nose or “thumb-nail” scrapers. Long, narrow, sharply-pointed drills or awls.

ARTIFACTS OF BONE, SHELL, AND ANTLER:
No data.

BURIAL CUSTOMS:
No data:

RELATIONS:
Some artifacts shared with Chisos Focus.
El Paso Polychrome trade pottery.
Livermore points occur in Mesilla Phase of Jornada Branch.
ESTIMATED AGE:

A. D. 800-1200 (Kelley, et al., 1940, p. 163). The present authors see no reason to set the date earlier than about A. D. 1200-1400, since this is the date given by Kelley for the La Junta Focus, which lies to the west and also contains El Paso Polychrome. The apparent lack of agriculture cannot be taken to give an early date if the El Paso ware is associated with the Livermore points.

SOURCES:

James, 1930; Kelley, Campbell, and Lehmer, 1940; Kelley, 1950, 1952.

HISTORIC STAGE

No complexes have been accurately defined for Indian cultures within the Historic Stage in all of Trans-Pecos Texas, except for those of the Bravo Valley Aspect in the vicinity of Presidio, namely, the Concepción and Conchos Foci. Sayles (1935) defined a Lipan Phase for Trans-Pecos Texas, but it was not formulated from cultural material found on sites identifiable with the Lipanes or “Lipan Apache”, and many of its traits are identical to those in his Hueco and Pecos River Cave Dweller phases. The Tobosos, Chisos, Jumano, and other tribes inhabited this section of Texas in the 16th century, so that camp material and artifacts, even if they come from sites with European trade materials, can hardly be lumped under a single label “Lipan”. As in other parts of Texas, research in historical archeology is badly needed.
PANHANDLE-PLAINS AREA

This includes all of the Llano Estacado in Texas, as well as lower plains on the eastern side of the Panhandle, and extends southward where the Llano Estacado gradually descends into the lower plains of the Edwards Plateau. Most of the evidence of a Paleo-American Stage from excavated sites in Texas comes from the Llano Estacado. The thousands of playa lakes of that region, where now-extinct Pleistocene fauna watered, contain beds of fossil bones in which are found dart points and butchering implements of Paleo-American hunters. Some of these lake beds no longer hold water and are undergoing extensive wind and water erosion. These ancient lake deposits have yielded hundreds—perhaps thousands—of Paleo-American artifacts to collectors who patiently follow the progress of erosion and watch for fresh exposures. Surface collections contain a few points possibly of the two Sandia types, and these must be very rare (if present at all). Ample numbers of points of the Clovis, Folsom, Plainview, Scottsbluff, Eden, Angostura (Long), and related forms not yet analyzed typologically are known in private and institutional collections but cannot be described here. In the section below the excavated sites of the Pleistocene age are briefly described.

Beyond the sporadic occurrence of a variety of stemmed dart points in surface collections from sites of this area which seem not to include pottery, there are no data concerning the Archaic Stage, either on the Llano Estacado or on the adjoining lower plains. We thus have the peculiar circumstance of a gap in our knowledge of several thousand years between the Paleo-American and Neo-American Stages. The definition of cultural remains in this gap is an important future problem for Texas archeology.

For the Neo-American Stage only one complex, the Antelope Creek Focus, has been formally defined. The sites of this focus, which is a blending of Plains agricultural and hunting economy with masonry of Puebloan derivation, occur along the Canadian River and its numerous short tributaries. On the eastern side of the Panhandle, on the
low plains, are a number of small sites which have the same
cordmarked cooking pottery and stone artifacts of the Antelope
Creek Focus, but there is no evidence of masonry architecture.

On the Llano Estacado south of the Canadian River valley are numerous sites around the larger, permanent lakes, and on the edges of dune fields where the sand retains rainwater and agriculture can be practiced without irrigation. Such sites are not closely connected with those of Antelope Creek Focus. They commonly include potsherds of many Puebloan types dating from about A.D. 1100 to 1800 or even later. In the spots where farming could have been practiced, some such sites may represent actual occupation by Puebloan peoples, driven eastward into the plains by wars or overpopulation (Krieger, 1946, pp. 75-82). On the other hand, some sites with small amounts of Puebloan pottery must represent temporary camps of Indians who went on annual bison hunts from the pueblos of the Northern Rio Grande Valley. Still other camps may be those of indigenous tribes which, like those of Antelope Creek Focus, received Puebloan pottery by trade from the west. Still further material of Puebloan origin, as well as that of indigenous peoples, may be found around lake beds in the extreme southern part of this area, east and southeast of the southeastern corner of New Mexico. Needless to say, some very important cultural complexes should be defined when excavations and analyses can be made for this region.

The Historic Stage is represented in the Panhandle-Plains principally by bison-hunting nomads, such as those met by the Coronado expedition in 1541, who followed the general pattern of life of historic Plains Indians except, of course, that they had no horses until much later. Puebloan Indians from north-central New Mexico continued their bison-hunting expeditions until the bison became extinct in this area in the 1870's.

PALEO-AMERICAN STAGE

The sites of this stage in which controlled excavations have been made are listed below. The reader should con-
sult the works cited for more details. Most of the specimens which we now identify as Clovis points were called "Folsom," "Folsom-like" "Folsmoid", or "Generalized Folsom" in the original literature, whereas others correctly retain Folsom as the type name.

**Miami Site, Roberts County.** Located on C. R. Cowan ranch, 9 miles northwest of Miami, Texas. Remains of Columbia mammoth found in deposits which filled a former water-hole or pond. Three Clovis points and a scraper were in direct association with the mammoth. Site first excavated in 1934 by Judge J. A. Mead and others, later by the University of Texas under direction of Glen L. Evans and E. H. Sellards (Sellards, 1938, pp. 999-1009; 1952, pp. 18-29).

**Lipscomb Site, Lipscomb County.** Pleistocene lake bed site 11 miles southwest of Lipscomb, Texas. Extinct bison the principal fauna. Eighteen points of Folsom type, two scrapers, a flake knife, and a channel flake in association with the bison. Excavated in 1939 by C. Bertrand Schultz for Nebraska State Museum (Schultz, 1943, pp. 242-249; Wormington, 1949, p. 33; Sellards, 1952, pp. 58-59).

**Lubbock Site, Lubbock County.** A stratified deposit in Yellowhouse Draw, within the city limits of Lubbock, was excavated by the Texas Memorial Museum in 1948, 1950, and 1951. Of the five strata recognized, the next to oldest one produced charred bones of extinct bison, four fluted Folsom points, one side scraper, and flint chips (Sellards, 1952, pp. 52-54, Fig. 24). A radiocarbon age determination was obtained on this charred bone of $9,883 \pm 350$ years, which is now widely accepted as proving that Folsom artifacts are approximately 10,000 years old.

**Plainview Site, Hale County.** An extensive fossil bed containing remains of extinct bison (estimated at more than 100 animals) discovered in a gravel quarry within city limits of Plainview. During excavation by the Texas Memorial Museum in 1945, eighteen projectile points of the Plainview type, and both side and end scrapers, were found in association with the bison. The bone bed had been cov-
ered with eleven feet of gravel and wind-blown sand. This is the type site for the Plainview point (Sellards, Evans, Meade, and Krieger, 1947, pp. 927-954).

Colorado City Site, Mitchell County. A fossil bed containing extinct bison bones, on the banks of Lone Wolf Creek near Colorado City, Texas, was excavated by Hay and Cook in 1924. Three projectile points were found in a block of matrix containing bison bones. One point was lost and no adequate description is available. Another is a basal fragment of the Plainview type. The third is complete and like Plainview except that the base is slightly convex; perhaps this is a Plainview variation (Krieger, in Sellards et al, 1947). The latter specimen may also be of a type found recently in the Portales Complex (Sellards, 1952).

Scharbauer Site, Midland County. In July, 1953, parts of a human skull were found exposed by wind erosion in the bottom of a sand blowout six miles south of Midland, Texas, by an amateur archeologist, Keith Glasscock. An excavation conducted at the site in February, 1954, revealed the geology of the sand formations and showed that the skull may belong to a very ancient deposit. Fluorine analysis of the human bone showed that it was contemporaneous with the Pleistocene animals in the same deposit (mainly extinct species of horse). In a series of five blowouts nearby, artifacts of the Folsom complex were found, in a geological position much later than that of the human skull. An extensive publication is in press; by Wendorf, Krieger, and others.

ARCHAIC STAGE

It has been mentioned that, although projectile points and probably other artifacts of the Archaic Stage occur widely in the Panhandle-Plains area, no sites have yet been located where a definite complex can be defined.

NEO-AMERICAN STAGE

Antelope Creek Focus

Numerous sites which include ruins of masonry build-
ings along the Canadian River and its tributaries have attracted amateur and professional archeologists for years. In 1921 W. K. Moorehead published a map and brief description of some of them, pointing out similarities with architecture of the Puebloan groups of New Mexico. Excavations conducted by Floyd V. Studer, Steward Johnston, W. C. Holden, and others have revealed much evidence as to the connections of this complex with the Great Plains and the Southwest alike. An economy based on both hunting and agriculture, use of bone hoe blades, cordmarked utility pottery, triangular arrow points with side and base notches, numerous bone and antler tools, and the absence of most of the characteristic Puebloan artifacts, indicate that the Antelope Creek Focus people reached the upper Texas Panhandle from the central Great Plains. In pushing southward into this area they eventually came into contact with the Puebloan Indian culture of northern New Mexico, and acquired a number of Puebloan traits such as multi-roomed dwellings, stone house construction, and painted pottery (which fortunately allows us to date this focus with fair accuracy at A. D. 1300-1450).

A summary of available data on the Antelope Creek Focus and its relationships with the Southwest, Plains, and other parts of Texas has been given by Krieger (1946, pp. 41-74). Watson (1950) then published on the closely related Optima Focus in Oklahoma Panhandle, which shows a somewhat less developed use of stone architecture and closer relationships with the central Great Plains, as one would expect. Both foci appear to have been approximately contemporary with the Upper Republican Aspect of Kansas and Nebraska. Krieger (1946) established the Antelope Creek Focus as the only focus in the Panhandle Aspect, while Watson (1950) added the Optima Focus to this Aspect.

COMPONENTS:

Type Component: Antelope Creek Ruin in the southwestern corner of Hutchinson County; excavated in 1930 by Texas Tech students under the direction of

Principal Excavated Components: Tarbox (Holden, 1930; Studer, 1931a; Moorehead, 1931; Holden, 1933), Alibates (Moorehead, 1931; Mason, 1929), Ruin 55 (Studer, 1934).

TYPES OF SITES:
Villages usually situated on ridges and promontories overlooking the Canadian River or its short tributaries; on mesa tops and small terraces with steep banks. Convenience to fields and water secondary to wide view and defensive features. Villages consist of multi-roomed, one-story pueblos, also scattered single rooms. Number of houses in a village varies from about six to as many as about eighty; no particular plan apparent.

HOUSES:
Pueblos consist of one-story rooms. Some are rectangular or nearly square, with sides oriented approximately in the cardinal directions; others are small, odd-shaped rooms, made by: (1) building out from the walls of large rooms, (2) partitioning large rooms, and (3) building across odd spaces and corners. Presumably large rooms were dwellings, while the smaller ones possibly served as storage bins, sleeping quarters or workrooms. In addition to, and separate from, the main block in each village are stone-walled single rooms. At present it is not known whether or not the rooms were constructed in pits.

Walls were constructed by placing large slabs vertically in the ground so as to form two parallel rows, then filling the space between the rows with adobe and rubble; on top of this other vertically parallel stones were mounted; each time the rows of vertical slabs were placed closer together, and again filled with adobe and rubble. Another method was to construct the wall of odd-shaped stones, held together by adobe mortar. On occasion, horizontal masonry was used,
particularly in corners; this is usually above an initial course of vertical slabs. Masonry construction, however, was confined in virtually all cases to the lower portion of the walls, the upper part of the walls and roof evidently having been of jacal-like construction.

Usually the larger rooms, which are the best made and follow a more definite plan, range in size from about 16 by 12 feet to 22 by 24 feet. Interior features of such rooms include: (1) a sunken central portion (about 6 to 10 inches deep) dividing the floor into three nearly equal sections; (2) four central supports; (3) a circular, plastered, or stone-lined, fire basin in the centrally depressed middle section; (4) a long (10 to 12 feet) masonry tunnel (ventilator ?), square in cross-section (18 to 30 inches), beginning slightly inside the room and extending eastward; (5) large slabs serving as deflectors between the tunnel and the fire basin; (6) occasionally two small anterooms or bins flanking the tunnel; and (7) slabs possibly used as covers for entrance hatches in the roof. Less frequently there are raised square or rectangular clay banks (altars?) at the west end of the central depression, opposite the tunnel. Entrance probably through the roof.

STORAGE PITS:

In house floors and outside within 20 to 30 feet are found slab-line oval and circular cists; also in floors are circular and rectangular pits. In some instances bell-shaped cache pits with interior plastered with adobe.

LIVELIHOOD:

Dependence on both maize agriculture and hunting-gathering. Direct evidence for maize (charred cobs); beans and squash inferred. Animals hunted were mainly bison, antelope, and deer; also various small animals and birds. Various nuts, berries, and seeds probably utilized.
CERAMIC TRAITS:

Type: *Borger Cordmarked*.

Temper: Crushed quartz, sand, and, less frequently, bone; shell probably absent.

Forms: Globular, round-bottomed jars with straight rims placed vertically or flaring slightly outward.

Decoration: Exterior completely covered with cord impressions, cordmarks sometimes smoothed over rim zone. Deep notches are fairly common in outer edge of lip; sometimes a single, deeply incised row of fingernail impressions around the base of the rim.

Remarks: Very similar to *Stamper Cordmarked* of Optima Focus (Watson, 1950) but does not have cambered rims or incised decoration.

Short, tubular pipes, uncommon.

Occasionally, disc cut from sherds, perforated or unperforated.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow Points: *Harrell, Fresno*, and possibly other types. *Harrell* points with and without base notch both common.

Dart Points (no named types): Broad, thick, 6.5 to 7.5 cm. in length, with broad notches in corners; stems vary from parallel-sided to expanding; bases straight to convex. Not so numerous as the arrow points.

Drills: Delicate shaft, bases unworked, square or T-shaped.

Scrapers: Snub-nosed; side scrapers made from large flint flakes.

Knives: Most common are the diamond-shaped, with four alternately beveled edges; also ovate-shaped, thin, flat, up to 19.5 cm. in length; and a narrow slightly curved form.

Double-bitted implements with two notches (axes, hoes?), made from quartzite pebbles, uncommon.
Panhandle-Plains Area

Crushing implements: Of quartzite, range from round to oval in cross-section, sometimes chipped to crude point.

Almost all of the chipped stone artifacts are of "Alibates flint", a red-banded, agatized dolomite. Large quarries north of Amarillo on ridges above Alibates Creek; smaller quarries farther north across the Canadian River.

ARTIFACTS OF GROUND STONE:

Sandstone milling stones with oval basin, most common. One troughed metate, open at one end, has been reported.

Manos: Oval to rounded-rectangular in shape, oval in cross-section with slightly flattened faces. A few wedge-shaped manos, indicating a back-and-forth motion, occur infrequently.

Unshaped sandstone fragments with grooves, possibly hones for sharpening bone and wooden implements. Shaft smoothers of brown sandstone, in the form of small blocks with grooves the length of one face.

ARTIFACTS OF POLISHED STONE:

Small disc beads and pendants of turquoise.

Elbow pipes of fine-grained sandstone and/or argillaceous limestone; arms barrel-shaped and of about equal length, but one (the bowl?) may be thicker; one or both ends have slightly raised flange which may be incised with simple lines.

ARTIFACTS OF SHELL:

Mussel shells with serrated edges.

Pendants of mussel shells with small holes at ends.

*Olivella*-shell beads with spires removed.

Cylindrical beads, probably of conch-shell columellae.

ARTIFACTS OF BONE AND ANTLER:

Hoe blades of bison scapulae.

Bison metapodials with beveled edges ("digging stick points").
Rasps of bison rib and deer metatarsal, parallel incisions made across one edge or one face.

Beaming tools of bison metapodial, scapula, and humerus.

Awls: Wholly or partially worked, and unworked; splinters with only tip worked; some awls square in cross-section with all four faces smoothed. Mainly made from deer and antelope leg bones, but also bison ribs and turkey leg bones. All forms sometimes decorated with incised lines.

Eyed needles, rare.

Flaking tools of bone and antler.

Antler tools with squared ends.

Occasionally bird-bone sections (beads?).

Tortoise-shell rattles, rare.

MISCELLANEOUS:

Plaited, twilled and coiled basketry.

Flint and quartzite hammerstones.

BURIAL CUSTOMS:

Individual placed flexed or semi-flexed in oval graves; graves sometimes lined with slabs; occasionally storage pits, both inside and outside the houses, used as graves. Some burials in ridges near site, but not in rubbish heaps. Slabs often placed on grave fill. No grave offerings, except personal adornments.

RELATIONS:

Celts of polished greenstone, oval in cross-section with tapered polls, rare and indicative of trade with Caddo Indians to the east.

Obsidian flakes or (very rarely) obsidian artifacts, and turquoise beads and pendants derived from New Mexico.


ESTIMATED AGE:

A. D. 1300-1450 (Krieger, 1946) for the period with
Panhandle-Plains Area

Puebloan trade material. The agricultural settlements may have been first established earlier.

SOURCES:

Holden, 1929, 1930, 1932, 1933; Johnston, 1939; Krieger, 1946; Mason, 1929; Moorehead, 1921, 1931; Sayles, 1935; Studer, 1931a, 1931b, 1934; Watson, 1950; Wedel, 1947.

HISTORIC STAGE

No archeological complexes have been defined for this stage. The whole Panhandle-Plains is singularly barren of camp debris which can be assigned to the nomadic tribes such as Apache, Comanche, Kiowa, and others that are known to have inhabited it and hunted the bison. Stone circles or "tipi rings" where stones were used to weight tipi covers are not uncommon, but it seems to be a general rule that nomadic hunters have left extremely few artifacts, food remains, graves, etc., in any one place.

We know from the Coronado documents that tribes called Querechos and Teyas were met in the present Texas Panhandle and that they were nomads with portable skin tipis, following the bison and living entirely from its products. Late in the 17th century the Comanche began to spread south from eastern Wyoming and Colorado, eventually holding dominion over almost all the western half of Texas and eastern New Mexico, forcing the earlier Querechos and Teyas (doubtlessly both Apache tribes) farther south and into Mexico. There are records of occasional graves found in rock clefts in northwestern Texas which have ornaments of brass, glass beads, parts of guns, knives, etc., and it is assumed that these graves are those of the afore-mentioned tribes. The nomadic peoples appear to have favored using rock clefts rather than to dig graves for their dead. Other than that, an occasional steel arrowhead, brass tinkler, or glass bead is about all we have to show for these bison-hunters for some 400 years of occupation.

No missions were ever established in this section of Texas.
NORTH-CENTRAL AREA

Because of mergings with archeological remains in surrounding areas, it is difficult to set definite boundaries for this part of Texas. In a general way it is marked by pottery cultures which existed in late pre-European times, the pottery being characterized as undecorated and heavily tempered with pulverized shell (type Nocona Plain). For present purposes the boundaries are taken as the 100th meridian on the west, the Caddoan archeological area in East Texas on the east, marked by Lamar, Delta, and Hopkins Counties, the Red River on the north, and a part of the upper Brazos River valley on the south, and the upper Trinity River drainage in Tarrant, Dallas, and Kaufman Counties.

Very similar archeological materials occur in south-central Oklahoma (Bell and Baerreis, 1951), principally in the Washita River valley and the Lake Texoma area. On the other three sides there are gradual transitions into different cultural remains treated in other sections of this volume. Trade pottery appears in the eastern part of this area from the Caddoan archeological area (see Wylie Focus), and trade pottery and true metates in its western part from Pueblo Indian culture in the Southwest (see Henrietta Focus). The native cultures of this area as a whole, however, were definitely of a Plains flavor, so that there are more similarities with Oklahoma, Kansas, and Nebraska than there are to the east, west, or south.

As in the other parts of Texas (except Trans-Pecos), projectile points of types essentially belonging to the Paleo-American Stage have been found in surface collections, sometimes mixed with material of later stages. No sites of the Paleo-American Stage have been excavated, but the "Lagow Sand Pit Man" provides an interesting case of ancient human remains (see below).

The Archaic Stage is represented by the Carrollton and Elam Foci of Trinity Aspect; and undoubtedly other complexes are yet to be defined. The Neo-American Stage is represented by two foci, Henrietta and Wylie; and like-
wise further complexes are to be expected. There are indica-
tions that certain remains along the Red River, now
included in Henrietta Focus, may provide a distinct focus
when further field work is done and strict associations can
be defined. The Bryan Focus of south-central Oklahoma
(Bell and Baerreis, 1951) may be found to have extended
south of the Red River; the ceramics of Henrietta and Bryan
Foci are similar but not identical and other traits should
be worked out in relation to these foci or to others not yet
defined. Our knowledge of the Historic Stage is virtually
confined to a single large site, that of Spanish Fort, part of
which is on the Red River bank in Montague County, and
part on the Oklahoma bank opposite.

PALEO-AMERICAN STAGE

Witte (1942) has described a few fluted points from
what he has called Clear Fork sites (see Central Texas
Area) in the general vicinity of the Little Wichita River
and its confluence with the Red. Other fluted points, both
Folsom and Clovis, some very small points apparently of the
Eden type, and numerous Plainview and Meserve points
have come from surface localities in various counties. The
Plainview type also appears in a number of Carrollton
Focus components (see Archaic Stage). As in the Edwards
Plateau Aspect of Central Texas, there appears to be actual
survival of Paleo-American projectile-point types into
Archaic complexes, as well as accidental association with the
latter when ancient points were picked up by later people.

Lagow Sand Pits, Dallas County

In 1920, human bones were discovered by workmen in
a gravel deposit, with the overlying strata reported to be
undisturbed. The degree of fossilization of the human bones
appeared to be about equal to that of the fauna in the
gravel, which included mammoth, camel, horse, bison, saber-
tooth cat, and other Pleistocene species. The skeletal ma-
terial is so fragmentary that little can be made of the phy-
sical characteristics (Shuler, 1923). There was no evidence
of cultural material at the site. From the point of view of
Pleistocene antiquity for human skeletal remains, the Lagow
Sand Pit discovery may be compared with the recent discovery at Midland, Texas (see Panhandle-Plains Area), and perhaps to the two mineralized skeletons reported by Ray (1934) from near Buffalo Gap south of Abilene.

ARCHAIC STAGE

Carrollton Focus (Trinity Aspect)

The Carrollton and Elam Foci of Trinity Aspect were recently defined by Crook and Harris (Crook, 1952; Crook and Harris, 1952, 1954). The Aspect is known primarily in the upper Trinity River valley, but it may extend as far south as the Whitney Reservoir on Brazos River. The general artifact assemblage appears most closely related to the East Texas Aspect of the Archaic Stage, but there are some similarities to the south with the Edwards Plateau Aspect. All known components in the Trinity River valley occur within the two uppermost members of the Union Terminal—Carrollton terrace.

The following list of traits for Carrollton Focus is based on test trenches, surface collections, and study of local collections, as compiled by Harris and Crook.

COMPONENTS:

Type Components: Wheeler Site near junction of Denton Creek and Elm Fork of Trinity River (Crook, 1952); and Dallas Lake Site just below old Lake Dallas Dam (Crook and Harris, 1952).

Other Components: Station 2 on Denton Creek, upstream from Wheeler Site; Station 4, below Beckham's Dam in Dallas; Station 8, near Seagoville in southeast Dallas County; Station 10, near Trinidad, Henderson County (Crook and Harris, 1952).

TYPES OF SITES:

Small campsites usually buried in river terrace material near small tributary streams.

HOUSES:

No data.
LIVELIHOOD:
No direct evidence; hunting and gathering implied.

CERAMIC TRAITS:
Absent.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:
Arrow points: Absent.

Dart points: Carrollton, Trinity, Wheeler, and Dallas types have been described by Crook and Harris (1952) but whether they are truly distinctive from other types described herein is open to question. Gary points also occur, probably including the "Denton Nub-Stemmed" of Crook and Harris. Examples of the Clovis and Plainview types have been found in Carrollton components, and are either survivals of an earlier cultural stage or of secondary association (picked up by later Indians).

Choppers: Made of quartzite and characterized by large, crude percussion chipping.

Scrapers: Clear Fork end scrapers, roughly triangular in outline with steeply beveled bits at the broad end; some have concave bits but more frequently the bits are straight. Also flint spalls with fine flaking on one or more edges; and large, roughly chipped side scrapers, usually made of reddish quartzite.

Gravers and Spokeshaves: Present.

Drills: Present, with stems similar to those of the local dart-point types, or made from broken parts of such dart points.

Knives: Crude, triangular in shape, chipped on both faces. Another form in leaf-shaped and usually better made.

Axes: Carrollton type; crudely made, double bitted with constriction in middle, or single-bitted with constriction opposite cutting edge.

ARTIFACTS OF GROUND STONE:
"Waco Sinkers", egg-shaped stream pebbles smoothed
by natural wear, with notch across each end. Manos of sandstone, one-hand size, rectangular in shape with rounded corners. Used on either one side or both. Milling stones showing rotary motion.

ARTIFACTS OF POLISHED STONE: No data.

ARTIFACTS OF SHELL, BONE, ANTLER: No data.

MISCELLANEOUS TRAITS: No data.

BURIAL CUSTOMS: No data.

RELATIONS: Sharing of certain dart-point types with East Texas Aspect to east and Edwards Plateau Aspect to south suggests contemporaneity at least in part of all three. *Carrollton* type of chipped axe is similar to that of the Fourche Maline complex of eastern Oklahoma, an early pottery culture, suggesting either contemporaneity or ancestry of *Carrollton* type.

ESTIMATED AGE: 2,000 to 1,000 B.C. (Crook and Harris, 1952).

SOURCES: Crook and Harris, 1952, 1954a, 1954b; Crook, 1952.

*Elam Focus (Trinity Aspect)*

The Elam Focus, while closely related to the Carrollton, is differentiated from it by dart points of smaller size, by an evident absence of the "Waco Sinkers", and by an apparently later position as judged by correlation with stream terraces.

COMPONENTS: Type Components: Wood and Milton Sites in Dallas County (Crook and Harris, 1952).
Other Components: Loving Site near mouth of Prairie Creek; and below this along Trinity River at least 18 others probably belonging to this focus, all in southeast Dallas County (Crook and Harris, 1952).

TYPES OF SITES:
Open campsites located on terraces above the present-day floodplains of both large and small streams.

HOUSES:
No data:

LIVELIHOOD:
No direct evidence; hunting and gathering of wild plant foods inferred.

ARTIFACTS OF CHIPPED STONE:
Projectile Points:
Arrow points: Absent.
Dart Points: Ellis, Yarbrough, Elam, and Gary. The "Ensor" and "Darl" points reported by Crook and Harris appear to belong to the Yarbrough type.
Drills: Slightly expanding stems or butts, shafts usually beveled.
Knives: Predominantly thick, rough, leaf-shaped; rarely double-pointed.
Scrapers: Clear Fork type of end scrapers like those of Carrollton Focus but smaller and less numerous. Also high-peaked "turtle-back" scrapers; heavy side scrapers; and small scrapers made by retouching one or more edges of flint spalls.
Choppers: Made from large quartzite nodules.

ARTIFACTS OF GROUND STONE:
Manos of sandstone, one-hand size, used on one face (rare).

ARTIFACTS OF POLISHED STONE:
No data.

ARTIFACTS OF SHELL, BONE, ANTLER:
No data.
MISCELLANEOUS TRAITS:

Hammerstones of quartzite.

BURIAL CUSTOMS:

No data.

ESTIMATED AGE:

500 B.C. to 450 A.D. (Crook and Harris, 1952). While these authors leave a 500-year gap between the end of Carrollton Focus and the beginning of Elam, the two foci must have overlapped in time.

SOURCES:

Crook and Harris, 1952, 1954a.

NEO-AMERICAN STAGE

Henrietta Focus

The Henrietta Focus was first defined by Krieger (1946, pp. 87-159) on the basis of excavations at the M. D. Harrell Site in Young County, at the junction of Brazos River and the Clear Fork. Surface collections in many other counties in the upper valleys of the Red, Trinity, and Brazos Rivers, and their tributaries, were added to determine the extent of the focus. The principal diagnostic trait is a plain pottery heavily tempered with crushed mussel shell, the type Nocona Plain. Commonly associated with this pottery are small triangular arrow points with two notches in their edges, and often a notch in the base as well; and a variety of bone implements, among them hoe blades made from bison scapulae and skulls.

Many sites of the Henrietta Focus represent a sedentary or semi-sedentary population supported by agriculture, hunting, gathering of wild plants, and fishing. The bone hoe blades are like those commonly associated with farming Indians of the Great Plains. The variety of implements made of bones of bison and other animals also points to the Plains, as in the case of the Antelope Creek Focus (see Panhandle-Plains Area). The shell-tempered Nocona Plain pottery may also be of northern origin, as it occurs in cen-
entral Oklahoma and is quite different from any shell-tempered ware in the Caddoan archeological area to the east. Relationships to the south are also evident in the apparent survival of dart-point types of the Edwards Plateau Aspect, although in the pottery-bearing complexes these darts are small and poorly made when compared with those of the Archaic Stage.

Contact with the Puebloan culture of the Southwest is shown by the common occurrence in Henrietta Focus of true metates, on which grinding was done with a back-and-forth motion of the mano, as in the corn grinding of the Puebloans and Middle American Indians. Occasionally potsherds of painted Puebloan types appear in Henrietta components, aiding in establishing their age. In the upper Red River valley, in the area about Vernon, Mr. and Mrs. J. H. Ray have found several magnificent polished celts of Ouachita Sandstone which undoubtedly were made within the Caddoan area in southwest Arkansas or southeast Oklahoma, and carried as far westward as the Panhandle boundary by Indian trade (Ray, J. H., 1946, p. 261).

The trait list below is based primarily on the Harrell Site, the added data collected by Krieger, and Witte (1936).

COMPONENTS:

Type Component: M. D. Harrell Site in Young County, excavated by University of Texas—WPA crew in 1938-39 under supervision of George R. Fox and A. T. Jackson (Krieger, 1946).

Other Components: Numerous unnamed sites in Young, Palo Pinto, Archer, Baylor, Wilbarger, Wichita, Clay, Montague, Cooke, and perhaps other counties.

TYPES OF SITES:

Open campsites on terraces of large and small streams, also on upland areas of loose, sandy soil where primitive agriculture could have been practiced. Size of sites varies from very small to as much as 30 acres or more.

HOUSES:

No data.
**LIVELIHOOD:**

Based primarily on maize agriculture and hunting. Direct evidence of maize found in charred cobs and kernels, but not of other domesticated plants as yet. Bison and deer bones most numerous, but many small animals, birds, and fish also represented. Occasional bone fish-hooks. Mussel shells found in quantity, and various wild plant foods and nuts probably used.

**STORAGE PITS:**

Simple pits two or three feet deep, without clay lining, and of irregular shapes are found in excavated sites and may have been used for food storage; they contain no skeletal material.

**CERAMIC TRAITS:**

Type: *Nocona Plain.*

Temper: Pulverized mussel shell.

Form: Mainly jars with bulging shoulders and rim bent outward, bases flat in some cases, perhaps convex in others. A few simple bowls, fairly deep, with convex bottoms. No complete vessels.

Decoration: Usually undecorated, but occasionally there are rows of small appliqued nodes around the neck at the base of the rim. Rarely, there are small rounded punctates on rim or body, or faint striations on body. No basketry impressions have been observed on the flat bases although this trait occurs on very similar pottery in southern Oklahoma, where the noded decoration is more common than south of the Red River.

Fragments of crude clay figurines, none complete enough to see form. Beads (?) of clay, roughly barrel-shaped with perforation running length-wise.

**ARTIFACTS OF CHIPPED STONE:**

**Projectile Points:**

Arrow Points: *Harrell, Fresno, Cliffton, Young,* and *Scollorn* types common; *Alba, Bonham,* and *Perdiz* also occur.
North-Central Area

Dart Points: Castroville, Pedernales, and Nolan points were recognized at the Harrell Site by Krieger (1946) but it was not proved conclusively that they were made by the Henrietta Focus people; they may have been survivals from an older culture in the vicinity. However, they were very poorly made and "decadent" when compared with true Archaic specimens from the Edwards Plateau Aspect and may well have continued into this horizon. Darl points are common in the Harrell and related sites in the upper Brazos valley, with either the stem or the blade beveled in opposite directions; if both the stem and blade are beveled, these are done in opposite directions from one another. Other dart points occur, not yet defined by type.

Knives: Diamond-shaped with four alternately-beveled edges, or with two opposed bevels at one end and rounded at the other. Also leaf-shaped knives with bases straight, convex, or almost pointed. "Curved knives" with one edge straight and other convex.

Scrapers: Small snub-nosed form, heel end sometimes constricted as though for hafting. Side scrapers made by retouching one or more edges of flint spalls very common. Oval scrapers, occasionally well made. The Clear Fork end scraper ("gouge") possibly survives, but if so is very rare.

Flakes with serrated edges, "saws".

Drills: Most commonly made from small flakes, unshaped except for the shaft, which is delicate and only about 1 inch (2.5 cm.) long. Also larger drills with base shaped to a narrow T or more or less square. Spokeshaves and tiny graver points found on flint spalls. Pick-like objects, crudely chipped, of size to fit in palm of hand.

Obsidian chips and (rarely) artifacts such as small projectile points.

ARTIFACTS OF GROUND STONE:

Metates of sandstone, thin, flat, used over nearly entire
surface but usually on one side only; often well shaped by pecking. With extensive use a very shallow basin may appear, but never as deep as on milling stones. Back-and-forth grinding can be seen by scratches running lengthwise.

Manos of rounded-rectangular shape, usually worn down on both faces but the two faces pecked to different degrees of roughness, may be linked with the true metates because they also bear straight scratches across their faces from back-and-forth rubbing. Most are of one-hand size, but long, two-hand manos appear occasionally in the upper Red River valley.

Milling stones less common, made from slabs of various thicknesses of both sandstone and limestone; rotary motion produced oval basins near the center, usually on one side, occasionally on both. The sills around the basin were not used and the whole stone shows little workmanship other than the ground basin.

Manos, commonly more or less oval stream pebbles of sandstone, limestone, and quartzite, and which do not show the crossing scratches of back-and-forth motion, are presumed to have been used on the milling stones. (One may suppose that the true metates were used for corn-grinding, a trait derived from the Pueblo culture, while the milling stones are representative of a very widespread implement in North America, of much greater age than metates, for pulverizing a variety of wild plant products, including nuts).

Hones of sandstone.

Shaft smoothers or abraders, consisting of poorly shaped sandstone blocks with a single groove running lengthwise. Possibly used in pairs clamped over arrow shaft, but definite pairs have not been recognized in this complex. More common in components close to Red River.

ARTIFACTS OF POLISHED STONE:
Celts, small, highly polished, of hematite.
Celts, thick, oval in cross-section with tapered poll, of polished "green-stone" (Ouachita Sandstone). Found principally close to Red River and probably carried westward up that valley from Caddoan area.

Pipes, equal-armed, of fine white siltstone or pale greenish-brown sandstone.

ARTIFACTS OF SHELL:

Small mussel shells perforated at thickest part near hinge (so-called "Hoe blades" but too fragile for this purpose).

Beads of *Olivella* shells with spires removed; probably a Gulf of Mexico species.

Disk beads cut from mussel (?) shells.

Mussel shells with serrated edges ("saws").

Large unperforated mussel shells, possibly used as receptacles.

ARTIFACTS OF BONE AND ANTLER:

Hoe blades of bison scapula, with and without socket in proximal end for hafting to wooden handle.

Hoe blades cut from top of bison skull, using base of horn as the hafted end.

"Digging-stick points" of hollowed-out bison metapodial or cannon bone, with shaft beveled to chisel-like edge (Red River components).

Knives and/or "draw-shave" scrapers made from bison scapula and skull-horn sections, with cutting edge running lengthwise (Red River components).

Awls made from split sections of deer metapodial or cannon bone; heads may be unworked (using natural end bone as butt), the head partly worked down, or the head entirely removed.

Awls made from splinters of deer and bison bone with only the tip worked.

Awls of fish bone sharpened at tip.

Awls of bison ribs trimmed to sharp tip (Red River components).
“Rasps” of bison ribs notched along inner edge; occasionally other bones notched along one edge or face.
Fish-hooks of bone, rare.
Long tubes (beads?) of bird-leg bone, either plain or covered with finely incised geometric designs.
Beads of short, plain sections of bone, from birds or small animals.
Flaking tools (?) of deer ulna trimmed to chisel-like points.
Flaking tools (?) of antler tines with bluntly rounded tips.

MISCELLANEOUS TRAITS:
Large flint hammerstone, thick or discoidal in shape.
Small blocks of hematite, faces scraped, then polished.
Pieces of meteorite.
Basketry impressions (coiled) on bases of pots (one Red River component; trait probably intrusive from Oklahoma).

BURIAL CUSTOMS:
Bodies tightly to loosely flexed, placed singly or in groups in shallow graves, with limestone slabs carelessly placed around sides of grave or over skeleton.
Burials placed in restricted areas of village site.
Usually without offerings that have been preserved; personal adornments such as beads left on bodies.
Heads not oriented in any particular direction. Hands sometimes over face. Multiple interments may be up to seven individuals; sometimes they were placed parallel with legs placed together, spoon-fashion. Instances have been found where either skull or mandible, or both, were entirely missing, and others where these parts were in the grave but out of their proper place.

RELATIONS:
Celts from southeast Oklahoma or southwest Arkansas carried westward up Red River valley as far as vicinity of Vernon (J. H. Ray, 1946).
Chupadero Black-on-White, "brown ware", and glaze-paint sherds from the Puebloan culture appear to be associated with some components. Obsidian, probably from New Mexico.

Flat metates with back-and-forth motion, probably diffused eastward from the Puebloan culture.

Sharing of a few dart point types with Edwards Plateau Aspect to south, and arrow point types with Central Texas Aspect to south; type Alba with Gibson Aspect in East Texas Caddoan area.

Olivella-shell beads by trade with Gulf of Mexico.

**ESTIMATED AGE:**

Puebloan trade pottery suggests a period of about 1400-1600 A.D., but the Focus may have been established earlier, before this trade began. The general pattern of life was similar to that of the Wichita Indians of historic times, but there are some significant differences and no evidence of European contact has been found with Henrietta Focus components. (Krieger, 1946).

**SOURCES:**


**Wylie Focus**

During preliminary analysis, Krieger (1946) included sites as far east as Dallas and Collin Counties in the Henrietta Focus. Beginning in 1948, the intensive reconnaissance and excavations of the Smithsonian Institution's River Basin Surveys, added to many years of field work by members of the Dallas Archaeological Society, resulted in a large amount of data which led to the recognition of a Wylie Focus as a separate cultural unit. Components of this focus are concentrated along the East Fork of Trinity River and one of its principal tributaries, Pilot Grove Creek. The chief components so far known are in Collin and Rockwall Counties.

Geographically, the Wylie Focus lies at the south-
eastern edge of the Great Plains and just west of the Caddoan archeological area of northeastern Texas. The artifacts reflect this intermediate position, being a blend of Plains and Caddoan traits, probably with some survivals from an earlier Archaic Stage. Judging from intrusive pottery types, Wylie Focus was contemporaneous in part with both the Gibson and Fulton Aspects (see East Texas Area). Stephenson (1950) placed the Wylie Focus within the Fulton Aspect, but has since withdrawn this in favor of treating Wylie Focus as an amalgamation of traits which can not easily be placed in any known aspect.

One of the most distinctive and interesting traits of this focus is the presence of a large, saucer-shaped pit in nearly every known component. The use of these pits is unknown. They appear too large to be house floors, and although they have definite floors, postholes have not been found in any order that would indicate walls. At the Hogge Bridge Site, where such a pit was excavated carefully, it was found that the central part had been dug out and the earth piled around the edges to increase the height of the rim. Both pit and rim, however, had smooth contours and gentle slopes. The Hogge Bridge pit measured about 100 feet across the highest parts of the rim and 10 feet deep in the center; one burial was found in the rim earth but this hardly explains the purpose of these basin-shaped earthworks (Stephenson, 1952).

Except for the pits, few if any Wylie Focus traits are distinctive, but the total assemblage is clearly different from any others. The question has not been settled whether these people made any pottery of their own, or obtained it all by trade: the plain, shell-tempered Nocona Plain probably comes from Henrietta Focus people to the west, and various engraved, incised, and punctated clay-tempered wares from Caddoan tribes to the east. Some of the latter sherds are obviously trade pieces, yet the total pottery is perhaps too much to be explained as entirely imported. Agriculture is indicated by charred corn and bone hoe
blades; because of this it is probable that some pottery was made.

COMPONENTS:
Other Components: Farmersville, Branch, Campbell Hole, Thompson Lake, and Butler Hole Sites, and Site 41-18D7-5 in Collin County; Upper Rockwall, Lower Rockwall, Glen Hill, and Gilkey Hill Sites in Rockwall County (Stephenson, 1949 a, 1949 b, 1952; Harris, 1942, 1947, 1948 a, 1948 c, 1948 d; Housewright, et al., 1947, 1948; Wilson, 1941, 1946; Hanna and Harris, 1948; Sollberger and Harris, 1949).

TYPES OF SITES:
Occupational areas on lower terraces of major streams, usually adjacent to or within the normal floodplain. Village sites range from two to 12 acres, and often are situated on a low knoll.

HOUSES:
One house floor excavated at Butler Hole Site by members of Dallas Archeological Society gave evidence of a small, oval structure, entrance probably through space between wall posts. Floor of hard, packed clay; central posthole and small cache pits within house; walls of wattle and daub construction.

EARTHWORKS:
A large, basin-shaped circular pit in most known components, possibly in all. Excavated pit in Hogge Bridge Site about 100 feet across the surrounding rim and 10 feet deep in center. Those at other sites range from somewhat smaller to somewhat larger.

LIVELIHOOD:
Agriculture indicated by fragments of charred corn at some sites, and hoe blades of bison scapula. Hunting
and gathering of wild foods and nuts also important. Fishing indicated by fish bones and occasional bone fish-hooks.

CERAMIC TRAITS:

Pottery not abundant, but small amounts of a wide variety of types found on Wylie Focus sites. Possibly all trade ware although some may have been indigenous. Sherds with shell temper of clay-grit temper most frequent, although occasionally sherds with pulverized bone or limestone found.

Types: Nocona Plain (see Henrietta Focus); Sanders Plain, Sanders Engraved, and Monkstown Fingernail Punctated (see Sanders Focus); brushed and incised ware probably from Frankston Focus; and unidentified shell-tempered sherds. Also engraved sherds from Caddoan area which differ from known types. Some bone-tempered and limestone-tempered sherds from Farmersville Site have basketry impressions on vessel bottoms, a trait more common in southern and eastern Oklahoma.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow points: Most numerous are Alba, Fresno, and Harrell types; Bonham and Perdiz also occur.

Dart points: Gary points dominant; Ellis points minor.

Scrapers: Small, snub-nosed, triangular in shape; large, crude scrapers of triangular, oval, and circular form. End scrapers made by chipping a steep bit across broken blades of projectile points, thus leaving stems which may have been used for hafting.

Knives: Moderately large, both triangular and stemmed forms.

Drills: Small, unworked bases and expanded, T-shaped bases.
ARTIFACTS OF GROUND STONE:
Shaft smoothers or abraders of sandstone with longitudinal groove.
Millings stones: Limestone slabs with shallow basins produced by rotary grinding.
Manos: More or less oval pebbles used on one or both faces.

ARTIFACTS OF POLISHED STONE:
Boatstones (rare).

ARTIFACTS OF SHELL:
Mussel shells with chipped edges (used as scrapers?).
Mussel shells with large holes cut near hinge (so-called "hoes").
Disk beads of conch shell.
Conch-shell gorgets, undecorated.

ARTIFACTS OF BONE AND ANTLERS:
Long slender bone pins, proximal end unaltered.
Short pins, proximal end unaltered.
Short pins with grooves around proximal end and ground to a flat spatulate shape.
Bone fish-hooks (rare).
Tubular bird-bone beads, 1 to 2 inches long.
Bone beaming tools.
Bone atlatl hooks.
Bone awls, splinters smoothed to sharp tips.
Hoe blades of bison scapula.
Flaking tools (?) made from split deer ulna.
Flaking tools (?) made from antler tines with rounded tips.

MISCELLANEOUS ARTIFACTS:
Hematite pigments.
Hammerstones:
Perforated bear-tooth pendants.

BURIAL CUSTOMS:
Both single and multiple interments, all flexed and sometimes located in a definite burial area. Usually
no offerings but in a few instances bone artifacts have been found in burials.

RELATIONS:
Trade pottery from Sanders Focus of Gibson Aspect to the east.
Brushed sherds and perhaps others appear to come from the Frankston Focus of Fulton Aspect to the east.
Plain shell-tempered Nocona Plain sherds either by trade with Henrietta Focus to the west, or the type was made by people of both foci.
Sharing of arrow-point types with Gibson Aspect (Alba points), Central Texas Aspect (Perdiz points), Henrietta Focus (Alba, Fresno, and Harrell points).

ESTIMATED AGE:
1300 to 1600 A.D. (Stephenson, 1952).

SOURCES:

HISTORIC STAGE

Spanish Fort Site

The so-called Spanish Fort Site is one of the largest historic sites in the southern Great Plains. Actually, there are two sites, one on each side of Red River. That on the Texas side is about one mile northwest of the present town of Spanish Fort in northern Montague County, on the eastern side of a big northward bend of Red River. In Jefferson County, Oklahoma, the historic site is said to be as large as that on the Texas side.

As a matter of fact, neither of these had anything to do with occupation by Spaniards. They were known in the 18th century as the “twin villages” of the Taovayas Indians, a tribe of the Wichita group. There is a widespread belief
that Coronado's Expedition visited these towns before going northward to the land of Quivira, in what is now central Kansas, but there is nothing in the Coronado documents to substantiate this. The two Taovayas villages were probably first seen by white men not long after the French had established the post of Natchitoches in central Louisiana. The French were primarily interested in trade and rapidly pushed their explorations up the Red River valley, perhaps reaching the mouth of Little Wichita River (above Spanish Fort) as early as 1718. The Taovayas villages became an important trading center, where Comanches from the west came to meet both the Taovayas and the French who resided among them. This situation must have obtained until the Louisiana Purchase in 1803, after which the French were no longer claimants to this land, but the Taovayas continued to live there.

The Spanish had only one contact with "Spanish Fort"—an unsuccessful attack on it in 1759 to punish the Taovayas and Comanches who had, the year before, come south to destroy the Spanish mission of San Saba in central Texas. This mission had been established in 1756 among Apaches who were the mortal enemies of the allied Comanches and Taovayas. When Captain Parilla, commander at San Saba, led the expedition northward to retaliate in 1759, he was astonished to find as many as 6,000 confederated Indians at the Taovayas "village" (which must have been the one on the south side of Red River). Moreover, it was fortified with entrenchments, stockades, and ditches, and over it flew the French flag. The defending Indians were well drilled in military discipline and soon routed the attacking Spanish, who left all their baggage and six field pieces.

The above notes will make it clear that the objects of European manufacture which have been found in great amounts on these sites by many collectors are probably mainly of French origin. Spanish objects may also exist, either directly from this raid or by some round-about trade from Spanish sources in New Mexico and elsewhere. In many cases, of course, it is impossible to tell whether certain types of
glass beads, iron bit and bridle pieces, parts of guns, locks, kettles, etc. are of either French or Spanish origin because they were too much alike. On the other hand, experts on such objects can often determine the country of origin, yet no one has yet undertaken such a study for the rich collections from Spanish Fort in private hands. That of Mr. Joe Benton of Nocona, Texas, is probably the largest, while A. H. Witte of Henrietta and others also have valuable material.

No excavation has ever been attempted systematically at either of these sites. The surface collections suggest that there may have been pre-European occupation here, but this cannot be proved yet. A number of differences have been noted in comparison with Henrietta Focus material, which is entirely of prehistoric age, so far as known. The Henrietta Focus therefore appears to represent a prehistoric agricultural people of unknown tribal affiliation, while Spanish Fort represents the known, historic Wichita-speaking Indians through the Taovayas tribe. The chipped-stone artifacts, polished stone elbow pipes, large grooved pemmican-pounding stones, and perhaps other traits of Spanish Fort definitely point northward for their origin. There is documentary material to show that the various members of the Wichita family probably did not live in Texas at all before 1700 A.D. The Taovayas may have been on Red River before that time, but it is necessary to explore such sites as Spanish Fort thoroughly to determine how long this site was occupied by the same group. The more southerly Wichita, such as the Tehuacane (Tawakoni) reached as far south as Waco and the prairie lands to the east of it in the late 18th and early 19th century, but they too seem to have come south of the Red River only shortly after 1700 (Krieger, 1946, pp. 144-150, 161-164).

Bolton (1914) has considered the history of the Taovayas villages in some detail, together with the French activities and Spanish attack. He has, however, located the twin villages near modern Ringgold, Texas, rather than at Spanish Fort, Texas. There is no doubt that the same
villages are involved, and since there is no historic site at Ringgold to fulfill the requirements, it is clear that Bolton erred in placing the Taovayas villages about 30 miles too far up the Red.

There is a striking similarity between the objects of European origin at Spanish Fort and at the Stansbury Site on the Brazos River in Hill County, a large historic site excavated by the River Basin Surveys in the Whitney Reservoir basin (R. L. Stephenson, manuscript in preparation). The Stansbury Site is believed to be the location of a Tehuacane (Tawakoni) Indian village in the late 18th and early 19th century. Since these Indians, like the Taovayas, also belonged to the Wichita family (and have often been confused with the Taovayas), and both tribes appear to have migrated southward from Kansas or Oklahoma at about the same time, this similarity in their materials is understandable and instructive.

Until the Spanish Fort collections are analyzed and published, a brief trait list must suffice to indicate the range of materials. The list has been compiled from the short study of the Benton and Witte collections made by Krieger (1946, pp. 161-164).

LOCATION:
On both sides of Red River, in Montague County, Texas, and Jefferson County, Oklahoma.

TYPE OF SITE:
Large open villages on flat terrace adjoining a major river; said to have been fortified with trenches and stockades in 1759.

HOUSES:
None have been excavated; written descriptions by 18th century writers describe Wichita houses as circular, shaped like bee-hive, with grass-thatched roofs and walls.

LIVELIHOOD:
Agriculture of considerable importance; hunting of
bison also important; hunting of deer and smaller animals; gathering of wild plant products. No evidence for or against fishing, but Wichita may have had common Plains Indian taboo against fish.

CERAMIC TRAITS:
Little pottery; what there is is incised, paddle-marked, and shell-tempered plain ware of unidenified types. Trade sherds from historic period in Caddoan area to east and Puebloan area to west.
Clay figurines, human, animal.
Globular beads.
Elbow pipes, of same form as stone pipes (see below).

ARTIFACTS OF CHIPPED STONE:
Projectile Points:
Arrow points: Principally, small triangular Fresno points or similar thereto; others, not yet defined.
Dart points: Reported but types not yet defined.
Drills: Small, with delicate shafts, bases unshaped.
Scrapers: Snub-nosed form of very small size. Also retouched flakes.
Knives: Diamond-shaped with edges beveled in alternate directions.
Gun flints, square.

ARTIFACTS OF GROUND STONE:
Manos: Unshaped stream pebbles; shaped sandstone manos with edges parallel and ends rounded. (Not known whether these were accompanied by milling stones or true metates with back-and-forth motion).
Shaft smoothers of sandstone blocks with longitudinal groove.
Pemmican pounders: Large pieces of stone with encircling groove and ends rounded, used as large hammers with wooden handles by historic Plains Indians.

ARTIFACTS OF POLISHED STONE:
Elbow pipes: Well made and highly polished pipes with bowl and stem parts meeting at right angle, stem end and bowl of about same size and length or
bowl somewhat longer than stem; often have a spur projecting beyond bowl, in line with stem.

Catlinite pipes: Various forms traded among historic Plains Indians. One complete specimen has cylindrical bowl rising out of a rectangular block, stem (of perishable material) once inserted into hole in side of block.

Fragments of fine-grained sandstone pipes.
Greenstone celt, thick oval in cross-section, tapered poll; probably a trade object from farther down Red River.

**ARTIFACTS OF SHELL:**

Disk beads of thick mussel shell, perforated in center.
Cylindrical beads cut from conch-shell columnellae.
*Oliva* beads, spires removed (rare).
Unperforated shell disks.

**ARTIFACTS OF BONE:**

"Digging-stick points" made from bison metapodials (rare).
Probably other traits present but collectors seldom preserve broken bone fragments, and bones tend to disintegrate on surface of sites.

**MISCELLANEOUS TRAITS:**

Arrow points made from gar-fish scales.
Perforated bear-tooth pendants.
Hammerstones.
Fossil crinoid stem sections, used as beads by stringing through natural hole in center, sometimes painted bright colors.
Fossil shell, drilled for suspension as bead or pendant.

**BURIAL CUSTOMS:**

Burials reported, but no details available.

**ARTIFACTS OF EUROPEAN ORIGIN:**

Metal projectile points, small axes, iron knives, hoe
blades, scissor blades, chisels, and other implements. Parts of metal locks, keys, brooches, bridle bits and fastenings, saddle ornaments and fastenings, guns, crucifixes, kettles, vats, etc.

Copper "tinklers" used to fasten to edges of clothes, probably also used as arrow tips by pushing cones over sharpened point.

Bracelets and other ornaments.

Glass bottle fragments.

Glass beads: Various shapes, sizes, and colors reported, but not yet analyzed.

RELATIONS:

Shell-tempered *Natchitoches Engraved pottery* from historic Glendora Focus of Caddoan area to east.

*Tewa Polychrome* pottery from Puebloan area to west, made in 17th and 18th centuries.

Clay figurines include horses, similar to those found at Pecos Pueblo, New Mexico.

*Oliva* and conch-shell beads show trade from Gulf of Mexico.

ESTIMATED AGE:

Occupation documented from middle 18th century into 19th century.

SOURCES:

CENTRAL AREA

The central area includes, generally speaking, the middle courses of the Colorado and Brazos Rivers, with their tributaries, plus some additional territory. It extends westward to include Tom Green and Edwards Counties, northward to a line extending from Jones to Kaufman Counties, on the east to the middle Trinity River, and on the south to the coastal and Southwest areas. Its most striking physiographic feature is the Edwards Plateau, a great limestone uplift dissected by numerous shallow canyons and valleys. Many springs are found in these canyons and along the Balcones Fault which marks the Plateau's southern margins. This country is now heavily covered with oak, mesquite, juniper, and elm on uplands and valley bottoms alike. There is a common belief that less than a century ago the uplands were luxurious grassland, with forests largely confined to the stream bottoms. The abundance of water, large and small game animals, various wild roots, berries, nuts, fish, birds, etc. provided an unusually favorable environment for primitive man. Flints of many varieties were abundantly available in many places, in quarries and stream gravel, and used in great quantity.

As in other sections of Texas, the central area offers no particularly distinctive traits for the Paleo-American Stage. There are numerous surface finds of projectile points which would be regarded as Paleo-American in the Great Plains, but most of these are found on sites which produce a large amount of Archaic material. This is particularly true of points resembling the Plainview and Angostura types, as discussed under Edwards Plateau Aspect. One fine Clovis point was found partially embedded in alluvium near somewhat disarticulated mammoth remains at the McLean Site in Taylor County, south of Abilene (Bryan and Ray, 1938; Ray, 1942). Clovis points are, however, of very rare occurrence in central Texas even though they continue to appear as far south as the Coastal Plain and the Rio Grande delta. Folsom points are also uncommon, a few having been found by Dr. Ray in the Abilene area and a half
dozen others coming from scattered localities as surface finds. Five Folsom points come from the dump pile of Kincaid rockshelter (see below). Of all the early types of projectile points, the Scottsbluff appears to be the rarest, only three or four fragments coming from central Texas, although this type too extends farther south into the lower Rio Grande valley and Coastal Plain. There are a number of puzzling aspects to the Paleo-American Stage in central Texas which cannot be solved without excavations directed toward them.

The Archaic Stage is represented by Edwards Plateau Aspect, a long-lived culture complex characterized by a great variety of dart points and many other artifacts of chipped flint. This complex is well known from numerous controlled excavations conducted by the WPA-University of Texas from 1936 to 1941, but almost none of this valuable data has been published. The tremendous numbers of projectile points, knives, and scrapers of flint, and great piles of discarded hearth stones, indicate that economy was based on hunting, deer bones being by far the most frequent. Numerous grinding tools testify that vegetal products were also of considerable economic importance.

The Neo-American Stage is represented by the Central Texas Aspect. Sites are similar to those of Edwards Plateau Aspect, on stream terraces and promontories, and in caves and rockshelters, but the quantities of refuse are far less. Usually the Central Texas Aspect material appears as a thin veneer over middens containing Edwards Plateau material for the most part. Some of the large more or less permanent sites, particularly those located on a fertile terrace, may have been partly supported by agriculture, but the fact remains that neither food remains nor implements have been found as evidence of agricultural practices. Pottery occurs widely in central Texas, much of it identifiable as trade ware brought in from surrounding areas; some sites, however, have numerous small sherds of peculiar ware not found elsewhere and which may be of local origin.
It has been suggested that the Austin and Toyah Foci of the Central Texas Aspect extended into historic times (Krieger, 1946; Kelley, 1947), but this suggestion has not been properly demonstrated. Flint artifacts of native origin have been found at mission sites, such as Goliad and San Saba, and some rock-crevice burials with European trade items have been found. However, there has as yet been no successful welding of historic material into an Historic Stage for the area as a whole, with its relationship to the Neo-American Stage. The Stansbury Site on the Brazos River in Hill County, excavated by the River Basin Surveys before being inundated by Whitney Reservoir, appears to have been the location of a Tehuacane (Tawakoni) Indian village (Stephenson manuscript in preparation).

PALEO-AMERICAN STAGE

Brief summaries of the two excavated sites of this Stage in Central Texas follow:

Kincaid Site, Uvalde County. This small cave four miles north of Sabinal, Texas, was excavated in 1948 by the Texas Memorial Museum, and the occupation area outside of it excavated in 1953 by the University of Texas Field School in Archaeology in collaboration with the Texas Memorial Museum. The five Folsom points found in a dump pile left by looters provided a tantalizing problem, so that the excavators hoped to find more such points in place. Despite a great amount of laborious work, no more such points were found; however, a wealth of new information resulted. Most interesting, it was found that Paleo-American occupation of the cave existed in contemporaneity with animals now extinct, particularly Pleistocene horse, bison, and mammoth, and other animals such as turtle and alligator. At this remote time, the human inhabitants were evidently annoyed with mud on the cave floor and brought in many large stream-worn stones, laying them in a fairly level pavement over at least half the cave area. This pavement overlay a clay pond deposit which is now higher than the river terraces outside the cave. Many bones of extinct
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animals lay over the pavement. Directly overlying the Pleistocene deposits, and separated from them by an erosional disconformity, was a thick occupation deposit of the Edwards Plateau Aspect. At the base of this deposit were found several projectile points closely resembling the Plainview and Angostura types, and others of lanceolate form not easily classified, (Sellards, 1952, p. 94; Campbell and Evans, extensive report in preparation).

Montell Shelter, Uvalde County. A small shelter was excavated in 1947 by Evans and Meade of the Texas Memorial Museum. It produced a large burned-rock midden of typical Edwards Plateau Aspect nature in the upper parts. Lower down were remains of extinct fauna, principally tapir (Sellards, 1952, p. 144). The artifacts have not yet been described. They suggest lanceolate forms of the Paleo-American Stage but as none are complete the identification is difficult.

ARCHAIC STAGE

Edwards Plateau Aspect

The Clear Fork Complex of Dr. C. N. Ray (1929, 1938, 1945, 1948) was the first definition of archaeological material which is now considered an integral part of the Edwards Plateau Aspect. Dr. Ray's pioneering work in the Abilene area was paralleled by that of Prof. J. E. Pearce of the University of Texas, who excavated in the burnt-rock middens of Travis and Williamson Counties, recognizing certain differences between their upper and lower levels. In 1935 E. B. Sayles published his famed Survey of Texas Archeology, the first definition of trait complexes for the state as a whole. His Round Rock and Guadalupe Phases are now considered to be slightly different expressions of the Edwards Plateau Aspect. From 1936 to 1941 the WPA-University of Texas Statewide Archaeological Survey conducted numerous excavations in central Texas, principally along the Colorado River in sites that are now beneath the waters of Lake Buchanan, Lake Travis, and Lake
Austin. One of the archaeologists of this Survey, J. Charles Kelley, spent some years in analyzing the specimens and excavation data from these sites, as well as from surface collections in many central Texas counties. So far, only a short chronological study of this material, without type definitions or descriptions, has been published (Kelley, 1947a).

Kelley recognized three loci in the Edwards Plateau Aspect: the Clear Fork, Round Rock, and Uvalde, incorporating in this scheme some of the ideas of his predecessors. The three foci are, however, chiefly recognized on the basis of comparative distribution and frequency of certain types of projectile points. On the other hand, it is well known that the types considered diagnostic of the three foci commonly occur together in the same sites and levels in the Central Texas Area. Without the basic data to demonstrate this three-fold division, if it can be demonstrated, the writers can only discuss the Edwards Plateau Aspect as a cultural unit, as we have done in the trait list below.

A notable feature of this Aspect is the seemingly sedentary nature of the larger sites. The great accumulations of burned and cracked limestone hearth rocks which typify these sites could not have resulted in any way except through the continued use of the same location for generations or even for centuries. Since, however, it is virtually certain that these people never practiced agriculture, it is probable that the sites were not inhabited the year around, but that each small band wandered over the surrounding area in search of plant and animal food, returning to the central location for part of the year.

The majority of these sites are found on river terraces, but others occur on promontories of the limestone, and in caves and rockshelters. Whatever their location, almost all these sites, of which several hundred are known, are marked by masses of burned and cracked limestone. Controlled excavations have proved beyond question that the stones are accumulations of broken limestone slabs; basin-shaped hearth pits were dug and lined with such slabs, which
cracked under heat and were thrown out, then replaced with new slabs. Such accumulations have been called “mounds” but since they were not purposefully erected they should be called “burnt-rock middens.” Between the rock fragments there is usually black earth and ashes, in which great numbers of flint artifacts and flint workshop material are found, as well as cracked animal bone, snail shells, mussel shells, and occasionally a human burial. So few burials have been found, however, even in the completely excavated middens, that they cannot possibly account for all the dead of these people. The majority must have been disposed of some other way, buried well away from the camp sites and middens, or cremated.

We have already mentioned the occurrence of projectile points in sites of the Edwards Plateau Aspect which, in the Great Plains, have consistently been associated with Pleistocene fauna. The Clovis and Folsom points very seldom if ever occur in association with Edwards Plateau Aspect material, so that it is probable that they constitute a distinct time period, or periods, as one would expect. The Scottsbluff type is very rare but the few specimens known cannot be associated with any particular complex as yet. The great majority of the early projectile points belong to the Plainview and Angostura types or are of similar lanceolate shapes that are difficult to classify in the present incomplete state of this typology. Over 200 such points have been recorded from central Texas, and doubtlessly several times this number could be recorded in private collections. Those for which we possess some data can be divided into surface specimens, and those which come from excavated sites of the Edwards Plateau Aspect. There are at least 100 of the latter from the WPA-University of Texas excavations in the Lake Buchanan and Lake Travis basins alone, and 20 more from other sites in which tests have been dug. The early types, however, are always found in very small numbers relative to the total of dart points from each site; it is unusual to find more than one or two in every 100 points of all kinds. There are several possible explanations for
so many projectile points which elsewhere belong to a Paleo-American Stage occurring here in scores of sites which contain a full-blown Archaic complex of artifacts:

1. They were picked up by the Archaic people from Pleistocene sites, just as we would pick them up today as curios; the later Indians likewise took them back to camp as curios or they actually re-used them (re-use is sometimes definite when the artifact shows re-shaping with fresher chipping marks).

2. They were accidental inclusions in refuse deposits of Edwards Plateau components, brought up from lower levels by the digging of hearth pits, graves, house pits, etc.; but if this were the case there was no evidence of the “accident” that the archaeologist could discover in any of the excavations.

3. The Paleo-American Stage lasted longer in central (and coastal) Texas than it did in the Great Plains farther north, so that when the Archaic Stage became established, this region was still inhabited by people making types of artifacts abandoned long before elsewhere; the great game animals of the late Pleistocene would have disappeared by this time, but somehow the ancient hunters kept existing here by turning to plant food as well as game and fish.

4. The Paleo-American Stage did not survive longer in central Texas, but the Archaic Stage began much farther back than we have been supposing.

There is insufficient evidence to settle on any answers to these questions. Both (1) and (2) doubtlessly account for some specimens in places where they appear foreign or intrusive. Choosing between (3) and (4) is a knotty problem which cannot be solved by logic alone; there is a great need for radiocarbon dates to determine the length of life of the Edwards Plateau Aspect and the ages of the terraces in which this material is commonly found. This question of how the Paleo-American and Archaic Stages may or may not have overlapped is not peculiar to central Texas, but occurs in the same manner in north-central, coastal,
and southwestern Texas and also has wide implications for North America as a whole.

In present knowledge, it seems beyond doubt that the Edwards Plateau Aspect existed for several thousand years. Radiocarbon dates on the Archaic Stage east of the Mississippi River have surprised archaeologists by showing that their previous estimates of 500 B.C. (or even 500 A.D.) for the beginning of this cultural pattern were far too modest. At least a dozen dates in Kentucky, New York, and other states show that its beginning was not later than 3,500 B.C. and may have been as long ago as 5,000 B.C. In central Texas we consider that a beginning date of not later than 4,000 or 5,000 B.C. is entirely reasonable, and that radiocarbon dates may necessitate moving this even farther back. The ending date has also been revised backward in recent years to somewhere between 500 and 1,000 A.D. by the present writers, due to pushing backward the estimated beginning date of the next culture stage, the Neo-American, in this region.

Several classifications have been made for cultural material in this area, and have proved to be exceedingly confusing to all archaeologists. The terms used by Kelley (1947a, 1947b) may be compared with those preceding him, as follows, for use in consulting the literature:

<table>
<thead>
<tr>
<th>KELLEY TERMS</th>
<th>PREVIOUS TERMS</th>
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<tbody>
<tr>
<td>Edwards Plateau Aspect</td>
<td>Pearce: Texas Kitchen Midden Culture, Bottom and Middle Levels.</td>
</tr>
<tr>
<td>Clear Fork Focus</td>
<td>Ray: Clear Fork Complex; Sayles: Abilene Branch; Gladwin: Round Rock Stage.</td>
</tr>
<tr>
<td>Round Rock Focus</td>
<td>Sayles: Round Rock Phase; Gladwin: probably Guadalupe and Menard Phases; Huskey: Mound A Culture, Lower Level.</td>
</tr>
</tbody>
</table>
Central Area

Uvalde Focus
Sayles: Late Edwards Plateau Culture; Huskey: Mound A Culture, Upper and Middle Levels.

We may repeat that none of these divisions has ever been demonstrated with intensive analysis of artifacts in different levels, or pertinent data on excavations. Until this is done and available we will consider the Edwards Plateau Aspect as a unit in the trait list below. It certainly is a cultural unit in a broad sense, the differences in the complexes named above generally being based on shifting frequencies of selected types of projectile points.

COMPONENTS:

Type Component: None designated.
Principal Excavated Components: Fall Creek Sites in Lake Buchanan Basin, Llano and Burnet Counties (Jackson, 1938); lower levels of Lehmann Rockshelter in Gillespie County (Kelley, 1947 b); Merrell Site in Williamson County (Campbell, 1948); Cedar Park Site in Williamson County (J. E. Pearce notes in Univ. of Texas files); Belton Reservoir Sites (Miller and Jelks, 1952) in Coryell County; sites in the vicinity of Abilene (Ray, 1930, 1937); sites reported by Huskey (1935) in the Nueces River canyons in Edwards, Real, and Uvalde Counties; one component of the Kincaid Shelter in Uvalde County (report in preparation by Campbell and Evans); lower component of Collins Site in Travis County (report in preparation by Suhm). About 40 excavations of the WPA-University of Texas are not listed here, the notes and collections being on file at the University.

TYPE OF SITE:

Rockshelters and open camp sites near water; occupation areas commonly indicated by masses of burned and cracked limestone mixed with ashes and cultural material. The cracked limestone occurs in caves
and rockshelters as well as on open sites, sometimes reaching over an acre of ground and a thickness of six feet.

**HOUSES:**

No data, but probably a simple and impermanent structure.

**LIVELIHOOD:**

Hunting, food-gathering, and probably fishing although fish bones seldom recovered in sites. Deer the chief animal hunted although bison bones occur frequently, as do those of various small mammals and birds.

**CERAMIC TRAITS:**

Absent.

**ARTIFACTS OF CHIPPED STONE:**

**Projectile Points:**

Arrow points: Absent.

Dart points: *Pedernales* (diagnostic of Round Rock Focus of Kelley), *Nolan* (diagnostic of Clear Fork Focus of Kelley), *Montell* (diagnostic of Uvalde Focus of Kelley); *Frio, Fairland, Castroville, Bulverde, Lange, Marcos, Marshall, Martindale, Travis, Uvalde,* and *Williams* are also all common types. *Kinney, Palmillas, Wells,* and *Tortugas* are minor types, while *Abasolo, Lerma, Langtry, Shumla, Pandale, Pandora, Morhiss,* and *Yarbrough* appear only rarely. *Darl,* and possibly *Ensor* points are believed to have appeared only toward the close of this stage (Miller and Jelks, 1952), and the same may be true of *Ellis* and *Edgewood* points.

**Gravers:** Thick, retouched flakes. Short, heavy graver (?) tips sometimes occur on edges of scrapers or spokeshaves.

**Scrapers:** *Clear Fork* type end scrapers (so-called "Clear Fork gouge"); large snub-nosed end scrapers; disc-like or oval scrapers; heavy side scrapers made
of large flint spalls retouched on one or more edges; miscellaneous small flakes or spalls with slight edge-work; spokeshave scrapers with small concave bit; very large curved scrapers with long, thick, concave bit.

Knives: Very numerous with all variations of shape from triangular to a broad leaf, with parallel-edged forms intermediate; all of these have concave, straight, and convex edges. Double-pointed form rare. "Curved" knives fairly common, with one edge more or less straight and other convex. Corner-tang knives and various others with stem off-center but not at corner. Knives generally under 1/2 inch thick.

Axes: Common, generally thicker than knives, made by crude percussion chipping only, and less variety in shape; commonly oval to rounded-triangular shape with bases usually convex, sometimes straight.

Choppers: Heavy percussion-chipped tools made from broken flint nodules, the stream-worn surface of one end fitting the hand, the other end fashioned into a jagged edge useful for splitting bones; if the cutting end is well fashioned with a definite blade, the object is a "fist axe" but such workmanship is uncommon.

Picks: Heavy core tools like choppers but smaller in diameter, worked over all or nearly all the surface, and crudely pointed.

Drills: Usually have heavy shafts two to four inches long, oval in cross-section; bases may be oval to square, worked on both faces, but the majority of "drills" appear to have been re-fashioned from broken projectile points of several types.

Scrap: All sites have quantities of flint scrap, both waste flakes and cores; these never show any consistency in form either in the manner of flake removal or in reducing the cores.
ARTIFACTS OF GROUND STONE:

Manos: Always of one-hand size, either shaped or unshaped. Shaped manos usually of limestone or sandstone, roughly oval in outline and worn on one or two faces; two convergent faces sometimes produced a wedge shape. Unshaped stream pebbles usually of granite, showing wear on at least one face.

Milling stones: Oval or circular depressions worn in one or both faces of unshaped stone slabs; most commonly limestone, sometimes sandstone.

Pipes: Large, egg-shaped, made of limestone pebbles without much exterior modification, holes drilled from both ends meet in middle; one has been found with bone-tube mouthpiece (very rare).

ARTIFACTS OF POLISHED STONE:

Pendants: Thin, flat, oval plaques, usually limestone but occasionally slate or metamorphic rock, holes drilled through one or both ends for suspension; sometimes decorated with extremely fine lines in geometric patterns.

Boatstones: a few crude examples of limestone appear to be indigenous; others may be importations from the Southeast United States.

ARTIFACTS OF BONE AND ANTLER:

Bone awls, infrequent.

Flaking tools of deer ulna and antler, infrequent considering amount of flint working done.

Drill handles (?): Short cylinders of antler with socket in one end.

ARTIFACTS OF SHELL:

A few perforated mussel shells (so-called “hoes”).

MISCELLANEOUS:

Pigments: Red and yellow ochre lumps, scraped for paint material. Pieces of dark bluish-gray graphite rubbed and scraped around edges, faces sometimes
hollowed out, apparently also for pigment.
Hones: pieces of limestone and sandstone with narrow grooves worn in faces, probably to sharpen bone tools.
Shaft abraders: rounded, elongate pieces of limestone with rounded groove running crosswise and a series of deep, narrow incised lines at right angle to the groove (Kelley, 1948, has described them).
"Tablets": Small flat objects of limestone and limonite or ochre with very finely incised lines in geometric patterns.
Hammerstones, generally of quartzite.
"Sinkers": Flat limestone pebbles, oval or irregular in outline, with two notches chipped into opposite edges.
"Waco sinkers": Small egg-shaped quartzite pebbles with two notches chipped across the opposite ends. These occur commonly in the northeast part of the central area, between Waco and Dallas, very infrequently elsewhere.

BURIAL CUSTOMS:
Individuals buried singly in flexed position in pits usually unlined but occasionally lined with limestone slabs set on edge. Few or no offerings of a durable nature were placed in graves. There is no consistent orientation of the head. Very few burials have been found in sites of this Aspect, hence burial or cremation away from villages may have been practiced.

RELATIONS:
Dart point types Wells, Gary, Ellis, Yarbrough occur in small numbers, made of local flints, suggesting diffusion from East Texas Archaic, although these types continue into pottery-bearing Gibson Aspect. The types Tortugas and Bulverde conversely occur in the Alto Focus of Gibson Aspect, where they appear to be made of local flints and the result of eastward

Sharing of other artifact types, particularly projectile points, with other Archaic complexes such as Aransas Focus in the coastal area, Falcón Focus in the southwest area, Pecos River Focus in the Trans-Pecos area, and Carrollton Focus in the north-central area.

ESTIMATED AGE:

From 4,000 or 5,000 B. C. to 500 or 1,000 A. D. This does not mean that the surrounding complexes mentioned above are all of equal age.

SOURCES:


NEO-AMERICAN STAGE

Central Texas Aspect

Central Texas Aspect sites are found in an area extending from the Brazos River drainage on the east and north, to approximately Tom Green and Edwards Counties on the west, and to the central coastal plain on the south. Like the Edwards Plateau Aspect, it roughly conforms to the Edwards Plateau limestone region, with a slight extension into the coastal plain area to the east and southeast. However, the Central Texas Aspect occupies a later chronological position than the Edwards Plateau Aspect, being marked by the appearance of pottery, small, thin arrow points, beveled knives, small snub-nosed scrapers, and other new traits. Much of this pottery can be identified as trade ware from various directions. The remainder may have been made in this area; at least its outside origin is doubtful.

Previous designations for the Central Texas Aspect include J. E. Pearce’s Texas Kitchen Midden Culture, Upper
Kelley recognized two principal divisions of the Central Texas Aspect,* the Toyah and Austin Foci, largely on distributional differences in arrow point types. He tentatively linked the Toyah Focus with the Jumano Indians of the early historic period (Kelley, 1947b, p.121), and the Austin Focus has been identified as the archeological remains of Tonkawa Indians (Krieger, 1946, pp. 165-168). Although the linkage with these historic groups is not improbable, it is best regarded as only tentative, as European items are conspicuously absent in Central Texas Aspect sites, and the archeological remains and their distribution do not altogether fit the early historic descriptions of the Tonkawa and Jumano Indians.

Differences in distribution of the pottery types and some of the arrow point types have been observed, and regional variations in arrow point typology and quantitative representation of several types of artifacts have been noted. Thus, it appears that the Central Texas Aspect should probably be divided into several foci. However, data are insufficient at present to accurately define the hypothetical foci; consequently the following trait list has been compiled for the aspect as a whole.

COMPONENTS:

Type Component: None designated.
Principal Excavated Components: Fall Creek Sites in the Lake Buchanan Basin, San Saba, Llano, and Burnet Counties (Jackson, 1938); sites in Belton Reservoir, Coryell County (Miller and Jelks, 1952); Blum Rockshelter in Whitney Reservoir, Hill County (Jelks, 1953); Lehmann Rockshelter in Gillespie County, upper level (Kelley, 1947b); Pictograph, Buzzard, and Sheep Rockshelters in Whitney Reser-

*Stephenson (1950, p. 154) listed a third focus, the Nueces, in the Central Texas Aspect. The Nueces and the Tradinghouse have been tentatively suggested as foci of the Central Texas Aspect by Kelley (unpublished manuscript), again on the basis of arrow point typology, but neither has been described or defined in detail.
voir, Hill and Bosque Counties (Stephenson, report in preparation); upper component at Kincaid Shelter, Uvalde County (Campbell and Evans, report in preparation); and upper component at Collins Site, Travis County (Suhm, report in preparation).

TYPE OF SITE:
Rockshelters and small open campsites along both large and small streams.

HOUSES:
No data. Probably never more than brush huts in most cases.

LIVELIHOOD:
Hunting of deer, bison, and various small game; gathering of wild plant products; fishing indicated by presence of bone fishhooks and fish bones in sites. Evidence of agriculture is lacking, but is suggested by the position of some semi-permanent villages on fertile terrace soil; trade with agricultural tribes to the west, north, east, and perhaps Middle America to the south, is fully evident in a variety of intrusive potsherds.

CERAMIC TRAITS:
Pottery Types: *Leon Plain* found sparsely but widely. *Doss Red Ware* (Kelley 1947 b) occurs rarely and may be Huastecan trade pottery. Brushed and punctuated utility ware similar in paste to *Leon Plain* occurs rarely.

Temper: Usually heavily tempered with finely crushed bone.

Form: No complete vessels known, but some sherds are from jars with high, slightly flaring rim, bases perhaps rounded or concoidal; bowls, shape unknown.

Decoration: Usually plain, sometimes surface well polished on both bowls and jars. Brushing, scoring, fingernail punctation are rare decorations. Polished
bowl sherds occasionally have baked red film or remnants of fugitive red wash.

OTHER ARTIFACTS OF CLAY:

No data.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow Points: *Perdiz* (principal diagnostic of Kelley's Toyah Focus), *Scallorn* (principal diagnostic of Kelley's Austin Focus), *Fresno, Cliffton, Alba, Bonham, Young*, and possibly *Cuney*.

Dart Points: *Ensor, Darl*, and probably *Ellis*.

Scrapers: Snub-nosed side and end scrapers; retouched flakes.

Spokeshaves.

Drills: Delicate shaft (often chipped on only one face), small, usually with unworked base.

Knives: Diamond-shaped with four beveled edges; triangular and leaf-shaped forms.

Choppers: Large and crudely chipped.

Gravers, sometimes combined with scraper on same flake.

ARTIFACTS OF GROUND STONE:

Edged manos; other having parallel sides, rounded ends and both faces showing evidence of having been used; large unshaped, water-worn quartzite pebbles having only one face showing evidence of use.

Milling stones: Limestone and sandstone slabs with round or oval depressions showing rotary motion.

Sandstone abrading stones or bones.

ARTIFACTS OF POLISHED STONE:

No data.

ARTIFACTS OF BONE AND ANTLER:

Notched bison ribs and deer metapodials.

Bone awls.

Deer-ulna and antler flaking tools.
Bone beads, cylindrical and usually made from bird-leg bones.
Tabular-shaped objects cut from ribs of large animals.
Bone fishhooks.
Bone needles (?)
Possibly antler projectile points.

ARTIFACTS OF SHELL:
Oliva shell beads.
Pendants cut from wall of conch and mussel shells, sometimes decorated with dots.
Mussel shell spoons and disk-shaped beads.

MISCELLANEOUS TRAITS:
Hammerstones.
Pigments, especially yellow and red ochre.
Pictographs on walls of rockshelters.

BURIAL CUSTOMS:
Flexed burials, usually single, sometimes placed in crude stone-lined pits; few or no burial offerings.

RELATIONS:
In the Brazos River valley there is evidence of contact with both the Fulton and Gibson Aspects to the east. Projectile point types Alba, Ellis, and Bonham, Copena knives, and potsherds of Alto and Sanders types all indicate contact with Gibson Aspect. Fulton Aspect potsherds, particularly from Frankston Focus, have been found westward into the Colorado River valley. Southwestern trade pottery occurs in the Abilene area.

Marine shells suggest trade with coastal Indians.
Obsidian must have come from Mexico or New Mexico.
Arrow points of types Fresno, Perdiz, and Scallorn shared with Rockport and Galveston Bay Foci of coastal area; types Perdiz and Fresno with Bravo Valley Aspect; type Perdiz with Frankston Focus of
Fulton Aspect and Wylie Focus of north-central area; types Scallorn, Fresno, Young and Cliffton with Henrietta Focus in north-central area.

A conch-shell gorget typical of Spiro Focus in eastern Oklahoma may belong to the Central Texas Aspect.

ESTIMATED AGE:
Kelley: 1200-1500 A.D.
Jelks: 800-1500 A.D.
Krieger: formerly about 1200-1500 A.D. but would now place beginning somewhere between 500 and 1,000 A.D.

SOURCES:

HISTORIC STAGE
Few sites in central Texas can be definitely assigned to the Historic Stage. At some of the Spanish missions native artifacts of flint, bone, and shell have been found which can be related to at least some of the Indians collected at these missions. Otherwise, there is only one Historic occupational site of consequence on record so far, the Stansbury Site in Hill County. This is probably the location of a Tehuacane (Towakoni) village of the late 18th and early 19th centuries. In addition to European material, there are marked differences between the native artifacts of Stansbury, the missions, and the Central Texas Aspect sites. Typologically, the Stansbury material may be more closely related to Historic sites such as Spanish Fort on the Red River, and those in northeastern Texas, than it is to any known prehistoric complex in the same area. These Historic links with known tribes are among the most serious gaps in the archaeology of Texas, and should be one of the best problems for future research.
COASTAL AREA

The coastal area of Texas is a flat plain which includes a series of very large bays and lagoons, as well as long off-shore islands, and extends inland variable distances, usually 40 to 60 miles, to where rock outcrops and slightly hilly country begin. Toward the southern end, the vegetation is primarily tall grass and there are hundreds of ponds as well as large fields of sand dunes. The central part is mixed grassland and forest with motts of oaks and other hardwoods dotting the plains, and dense corridor forests along the streams. The eastern part grows increasingly more forest-covered, containing large stands of southern pine on open ground, jungle-like tangles of hardwoods and vines along the rivers, and open grassy plains near the ocean. Most of the rivers broaden and become sluggish on nearing the coast or the bays into which they empty. Most of the known archaeological sites are along the shores of the bays, islands, and lagoons; the few sites known farther inland appear to be similar to those near the shores.

The Paleo-American Stage is represented by but a few artifacts, most of which are Clovis fluted points, and there are many reports of late Pleistocene fossils, often of mammoth. The coast is thus a very promising field of research for this stage, but only one site has been extensively excavated (see below).

Material of the Archaic Stage occurs widely in this area but only one complex is as yet well defined. This is the Aransas Focus in the central portion, particularly around the shores of Aransas and San Antonio Bays (see below). The Oso Phase of Sayles (1935) was defined from material found near Oso Creek on the south side of Corpus Christi Bay, but his data are insufficient for close comparisons with the Aransas Focus or later complexes in the Neo-American Stage. In the Addicks Reservoir area west of Houston, Wheat (1953) found considerable pre-ceramic material underling that of the Galveston Bay Focus (Neo-American Stage), but this has not yet been defined as a distinct complex. Dart point types in the Addicks area indicate rela-
tionships with the East Texas and Edwards Plateau Aspects of the Archaic Stage, as well as with the pottery-bearing Tchefuncte complex of Louisiana. Undoubtedly other Archaic manifestations will be defined.

In the Neo-American Stage three complexes have been defined, but none in detail in published form. These are the Galveston Bay Focus on the east, Rockport Focus in the center, and Brownsville Focus extending from the south tip of Texas into the coastal plain of Tamaulipas, Mexico. The first two are much alike in their stone artifacts but their potteries are quite distinct and unique (the origin of neither pottery tradition has been determined). The Brownsville Focus, on the other hand, contains great numbers of shell artifacts lacking (for the most part) in the other two, and pottery which can definitely be traced to an origin in the Huastecan area on the east coast of Mexico. There are considerable numbers of potsherds and a few whole vessels in the Rio Grande delta area which must have come there by trade from the south, although it is possible that the actual manufacture of such pottery gradually diffused northward up the coastal fringe as far as Arroyo Colorado in Cameron County. The gaps between these three foci are poorly known and should be explored.

In Orange County, just west of the Louisiana border, there are sites with potsherds of the Marksville complex. These sites must represent either a small extension of the Marksville complex into Texas, or people who received more of this particular ware by trade than any others in Texas.

The Historic Stage is represented by such articles as arrow points and scrapers chipped from glass, glazed pottery and chinaware, iron, glass beads, etc. In the central portion the Rockport Focus appears to contain such objects and therefore continued into this stage, although this applies to very few of its components. Glass arrow points have been found on the surface of Brownsville Focus sites, but since none of these have been excavated, it is uncertain whether this is fortuitous or the Brownsville Focus actually
lasted into European times. In this area the first important contact with Europeans was in 1747, when José de Escandon explored what is now Tamaulipas. At the other extreme, none of the Galveston Bay Focus components are known to show any European materials. However, there are Spanish mission sites in both the central and eastern portions of the coastal belt which should produce valuable clues to the connections, if any, between the above-mentioned culture complexes and the Indian tribes who gathered about the missions.

PALEO-AMERICAN STAGE

Buckner Ranch Site, Bee County:

A WPA-University of Texas excavation sponsored by the Bureau of Economic Geology was carried out at this site, 12 miles east of Beeville, in 1938-39 to collect Pleistocene fossils. In the lower levels of the stream terrace, below the remains of mammoth, mastodon, extinct horse, bison, and glyptodon, were found a few projectile points. Viewed in our present knowledge of late Pleistocene artifacts, these points would seem not to have been in direct association, because farther north, in the Great Plains, they fall into two or three distinct time levels and usually appear with different species of extinct fauna. The possibility that the Buckner Ranch artifacts and the overlying fossils were in secondary deposition was carefully examined in the field, and while no absolute conclusion was made, the association appeared to be a primary one (Sellards, 1940). The artifacts were not water-worn and there were hearth stones in place in the silt higher up. Referring to Sellards' Plate I, the artifacts can be identified in current terminology as follows: No. 4, Angostura point; No. 5, Scottsbluff point, tip and most of stem missing; No. 6, a corner-notched dart point of a style not otherwise reported from a Pleistocene site, but found in the Edwards Plateau Aspect; No. 7, a very thin, flat, and finely chipped fragment of what must be included in the Folsom type but was simply too thin to flute; and No. 8, the base of a fluted Clovis point. No. 9, said to be in the lower stratum, was included by error and came from another site.
The sixth specimen from the lower level is almost exactly like No. 6, the corner-notched dart point. Nos. 1 to 3 on this plate came from a higher level, above the fossils (No. 1 is a Pedernales point).

Another explanation for this curious mixture is that types stratigraphically distinct in the Great Plains, and such animals as the mammoth, mastodon, horse, and large Pleistocene bison, actually survived longer close to the Gulf coast (now a sub-tropical zone) than they did in the Great Plains. This requires that all the afore-mentioned types would have been manufactured at about the same time, and that the several animals mentioned lived here until something like 6,000 years ago, or until artifacts of the Archaic Stage were already appearing. As usual, we need information from more sites.

Other finds:

Clovis points have been reported from surface collections almost throughout the coastal belt. Three or four come from heavily-wooded Harris County in the vicinity of Houston, while the base of a Clovis point was found by A. E. Anderson close to the Rio Grande mouth in 1933. W. A. Price, visiting the site of the latter specimen some years later, found mammoth bones weathering from the clay nearby. A fine, long Clovis point of black flint comes from Calhoun County, and others from Aransas and San Patricio Counties. Plainview points have been found in fair numbers in the Morhiss site in Victoria County and another was found within a few feet of weathered mammoth bones on the south shore of False Oso Creek, south of Corpus Christi, in January 1954 by F. Berlet. A broken specimen, apparently a Plainview, was found recently near Houston by Elwyn Simons.

ARCHAIC STAGE

Aransas Focus

The Aransas Focus is an Archaic complex known from shell middens concentrated in the vicinity of Aransas and San Antonio Bays. Some dart points from these middens
are of Edwards Plateau Aspect types. However, the extensive use of shell, particularly conch, for the making of tools and utensils sets the Aransas Focus apart from the other known Archaic complexes in Texas. Shell artifacts similar to those found at Aransas sites occur along the northern and northwestern coast of the Gulf of Mexico, Florida, the southern Atlantic coast, and in the Caribbean Islands. The distribution of these shell artifacts may be the result of a widespread Eastern Archaic pattern; or they may be merely a reflection of a similar widespread adaptation to available local materials provided by the environment. Data at present are too inadequate for the confirmation of either of these interpretations.

Aransas Focus sites were first recorded by George C. Martin and Wendell H. Potter during their survey of the Texas coast in 1927-1929. In the 1930’s The University of Texas excavated several Aransas sites. Definition of the focus, however, is primarily the work of T. N. Campbell (1947 and 1952), and is based largely upon three excavated sites.

COMPONENTS:

Type Component: The Johnson site, located on the west side of Live Oak Peninsula, in Aransas County; excavated sometime during 1927-1929 by George C. Martin and Wendell H. Potter. In 1930 A. M. Wilson did some testing for The University of Texas; final excavations by The University of Texas-WPA in 1940-41 under the supervision of William A. Duffen (Campbell, 1947, p. 43).

Other Excavated Components: Kent-Crane and Live Oak Point Sites both on Live Oak Peninsula, Aransas County (Campbell, 1947, p. 63).

TYPES OF SITES:

Shell middens located on shores of coastal bays and lagoons.

HOUSES:

No data.
LIVELIHOOD:
Extensive use of shellfish, principally oyster, clam, and conch; also utilized for food to a considerable extent were various large animals (bison and deer), and small game such as peccary, raccoon, rabbits, and various aquatic birds. Fish, and to a lesser extent, wild plant products were also used. No evidence of agriculture.

CERAMIC TRAITS:
Absent.

ARTIFACTS OF CHIPPED STONE:
Projectile Points:
Arrow Points: Absent.
Dart Points: Types Ensor, Marcos, Lange, Kent, and Travis most common; Tortugas, Matamoros, Catán, Abasolo, and Palmillas also occur. Castrovilla, Desmuke, Bulverde, Ellis, Fairland, Kinney, Nolan, and Morhiss appear rarely.
Remarks: “Dart” points along the whole coastal margin are generally much smaller than in the interior, probably due to the scarcity of stone of any kind and the Indians’ need to utilize the smallest pieces.
Drills: Small, made from flint flakes.
Scrapers: Plano-convex end-scrapers; flakes with retouching on one or more edges.
Gravers: Made from small flint flakes, not common.
Knives: Triangular form, lateral edges slightly convex and bases vary from straight to convex.
Axes: Percussion chipped, thick in cross-section, and more or less oval in outline.

ARTIFACTS OF POLISHED STONE:
No data.

ARTIFACTS OF GROUND STONE:
Limestone and sandstone abraders.
Milling stones: Sandstone, shallow basin.
Manos: Sandstone, oval in outline, and evidence of use
on only one face. Grinding implements are uncom-
mon.
Large tubular sandstone pipe with stem made from the
long bone of a bird.

ARTIFACTS OF BONE AND ANTLER:
Tubular beads of bird bone, less frequently of long
bones of mammals; both plain and decorated. Deco-
rations consist of simple geometric designs, both in-
cised and “dotted” (lines of tiny drilled holes).
Awls: Usually made of deer ulna; also from split bone,
sometimes decorated in a manner similar to the beads;
and splinter awls with only the tip smoothed.
Pin-like objects, pointed at one or both ends, either
plain or incised.
Antler occasionally used for awls and flint-knapping
tools.

ARTIFACTS OF SHELL:
Adzes or Axes: Made from conch-shell whorl (wall),
rectangular, beveled on one edge or on opposite edges.
Gouges: From conch columella with anterior of col-
umella fashioned into chisel-like cutting edge.
Small disc-shaped objects cut from the whorl of conch-
shell.
Scrapers: Made from the lip portion of the conch body-
whorl.
Centrally perforated oyster shells.
Clam-shell knives or scrapers with chipping along one
edge.
Awls: Made by sharpening the tips of conch-shell
columellae.

MISCELLANEOUS TRAITS:
Twined basketry indicated by impressions preserved in
asphalt; also matting, but technique uncertain.
Miscellaneous lumps of asphalt.
Hammerstones: Oval, stream-worn pebbles or flint
nodules.
Various soft stones probably used as source of pigment.
BURIAL CUSTOMS:
Placed either flexed or extended in shell middens; unaccompanied by offerings of a durable nature.

RELATIONS:
Presence of flint (not occurring naturally on coast) indicates trade with inland groups or trips inland to the sources of flint.
Most of dart-point types named above shared with Edwards Plateau Aspect.

ESTIMATED AGE:
No objective basis for dates at present; more or less contemporaneous with other Archaic complexes such as Edwards Plateau Aspect.

SOURCES:
Campbell, 1947, 1952; Martin, n.d.

NEO-AMERICAN STAGE

Rockport Focus

This complex in the central portion of the Texas coast was first defined as the Rockport Phase by E. B. Sayles (1935), who organized and enlarged upon the previous work of George C. Martin and Wendell H. Potter. Sayles' trait list, however, includes material now attributed to the Galveston Bay Focus of the eastern portion of the Texas coast. The Rockport and Galveston Bay Foci share arrow point types Perdiz, Fresno, Scallorn, and Cliffton and probably other traits, but are differentiated by their distinctive pottery.

Rockport components frequently overlie those of the earlier Aransas Focus. Further evidence of a late chronological position for the Rockport Focus consists of an occasional arrow point made from glass and the intrusion of European items, indicating its continuation into the Historic Stage.

It seems probable that Rockport Focus represents archeological remains of the “Karankawa” Indians (a term
applied collectively to a number of tribes living around the bays of this coast).

COMPONENTS:
Type Component: None designated.
Excavated Components: Mustang Lake and Live Oak Point Sites, Aransas County; Webb Island Site, Nueces County.
Other Components: Numerous pottery-bearing sites on coastal plain from Matagorda Bay to Baffin Bay.

TYPE OF SITE:
Small campsites and shell middens located near island and mainland beaches, and inland on the coastal plain.

HOUSES:
No data.

LIVELIHOOD:
Fish and shellfish; large and small animals; birds; roots, berries, and water plants.

CERAMIC TRAITS:
Pottery types: Rockport Plain, Rockport Incised, and Rockport Black-on-gray.
Paste is gritty, hard and compact with tiny white inclusions of bone and shell (?) frequently showing on surface.
Forms: Bowls, bottles, possibly jars; in some instances the bases appear to be conical.
Decorations: Asphaltum used to make broad lines, squiggles, dots, etc., on upper parts of vessels; incised lines occasionally occur.

ARTIFACTS OF CHIPPED STONE:
Projectile Points:
Arrow Points: Perdiz, Scallorn, Clifton, Fresno.
Dart Points: Matamoros and Catán types appear to survive.
Small handaxes: Roughly chipped stream pebbles.
Knives: Small, leaf-shaped.
Scrapers: Small flakes, and rounded, snub-nosed scrapers. 
Small drills, made from flakes.

ARTIFACTS OF POLISHED STONE:
  Pendants.

ARTIFACTS OF GROUND STONE:
  Grooved sandstone.
  Small river pebbles, probably used as abrading stones.

ARTIFACTS OF SHELL:
  Freshwater and marine-shell pendants.
  Sea-shell beads.
  Triangular arrow points.
  Conch and oyster-shell axes with perforation for hafting.
Scrapers: Cut from section of conch shell with bevel along cutting edge.
  Needles or awls.

ARTIFACTS OF BONE AND ANTLER:
  No data.

MISCELLANEOUS:
  Perforated animal teeth.
  Hammerstones of pebbles, including flint nodules.
  Lumps of asphaltum, obtained on nearby beaches.

BURIAL CUSTOMS:
  No data.

RELATIONS:
  Projectile points made from glass show complex continued into European times.
  Other items of European origin include clay pipe and artifacts of metal.
  Sharing of arrowpoint types with the Central Texas Aspect and Galveston Bay Focus.

ESTIMATED AGE:
  From sometime after 1000 A.D., lasting until 1800 or 1850.
Sources:
Campbell, 1947; Martin, n. d.; Potter, 1930; Sayles, 1935.

Galveston Bay Focus

Along the eastern portion of the Texas coast and extending inland for an unknown distance, are campsites and shell middens of the Galveston Bay Focus. This focus is known from three partially excavated sites in the Addicks Reservoir area (Wheat, 1953) and from numerous unexcavated sites along the coast and on the shores of inland bays.

A detailed inventory of the artifact complex is not possible at this time but two pottery types, Goose Creek Plain and Goose Creek Incised—identical in vessel shape and paste—are considered to be diagnostic traits of the Galveston Bay Focus. Arrow points associated with components at Addicks include types Alba, Perdiz, Scallorn, Fresno, and Clifton. Alba has a very broad distribution northward and eastward from Addicks, occurring in many complexes of the Caddoan area and eastward into the Lower Mississippi Valley. The other four arrow-point types are shared with the Rockport Focus, the Central Texas Aspect, and other complexes.

A non-ceramic complex containing dart points of the East Texas Aspect and, to a lesser degree, the Edwards Plateau Aspect, underlay the Galveston Bay components at Addicks, and there is evidence that some of these Archaic dart point types may have survived into the Galveston Bay Focus.

The following trait list is based entirely on the Addicks Reservoir sites west of Houston (Wheat, 1953). Whether or not the same traits all occur in sites along the bay shores and Gulf cannot be determined until some of them have been excavated.

Components:

Type Component: None designated.

Excavated Components: Doering, Kobs, and Grisbee sites, and site 66A6-4 in the Addicks Reservoir basin, Harris County (Wheat, 1953).
TYPES OF SITES:
Campsites, often indicated by midden deposits and shellheaps.

LIVELIHOOD:
Hunting of deer, bison, antelope and small game; collecting of shellfish; and fishing.

HOUSES:
No data.

CERAMIC TRAITS:
Types: Goose Creek Plain, and Goose Creek Incised.
Temper: Sand mainly, pulverized sherd and calcium phosphate of minor importance and possibly late in complex.
Forms: Most characteristic are deep cylindrical jars with slightly out-curving rims, and deep, wide-mouthed simple bowls; bases usually round or conical.
Decoration: Confined to upper portion of vessel and includes lip notching, fine incising and punctating on rims. Occasionally red wash applied to exterior of vessel.

ARTIFACTS OF CHIPPED STONE:
Projectile Points:
Arrow Points: Perdiz, Clifton, Scallorn, Fresno, Alba.
Dart Points: Gary and possibly other Archaic types survived (See Wheat, 1953, for analysis).
Scrapers: Side, end, and flake.
Choppers: Present.
Knives: Leaf-shaped, triangular, double-pointed, and diamond-shaped with alternately beveled edges.
Drills: Small, expanding base.
Gravers: Present.

ARTIFACTS OF POLISHED STONE:
"Boat-shaped stones" or atlatl weights, possibly associated.

ARTIFACTS OF GROUND STONE:
Sandstone abraders.
Milling stones with oval depressions.
Manos.

**ARTIFACTS OF BONE AND ANTLER:**
Awls.
- Flaking tools of deer ulna.

**ARTIFACTS OF SHELL:**
Possibly pendants.

**MISCELLANEOUS:**
- Pigments of yellow and red ochre.
- Hammerstones.

**BURIAL CUSTOMS:**
Flexed, with few or no offerings of a durable nature.

**RELATIONS:**
Sharing of arrow point types *Perdiz, Cliffton, Scalorn,* and *Fresno* with the Central Texas Aspect and Rockport Focus; *Alba* points shared with foci of Gibson Aspect in Caddoan area to north.
Occurrence of *Goose Creek* ware in Rockport components (T. N. Campbell, personal communication); and Rockport Black-on-gray from one Addicks Basin site. *Tchefuncte Stamped* sherd intrusive from Tchefuncte complex in the Lower Mississippi Valley (See Wheat, 1953, Pl. 33, K).

**ESTIMATED AGE:**
Some evidence that this focus lasted a long time with little change. If the Tchefuncte trade sherd is acceptable for dating, the focus probably began before 500 A.D. The Addicks sites have no European material and must have been abandoned before 1700; the question of survival into historic horizon elsewhere remains to be answered.

**SOURCES:**
Wheat, 1953.

*Brownsville Focus*

Components of the Brownsville Focus are located in the
extreme southern tip of Texas, on the Rio Grande delta and along the coastal margin about to the San Fernando River in northern Tamaulipas. The artifact complex is known principally from the large surface collections of A. E. Anderson, who first recognized the focus, although Sayles (1935) named and more fully described it as the Brownsville Phase. The most striking feature is the great number of shell artifacts, especially ornaments. Although this abundant working of shell is a very distinct industry, the suggested association of artifact types below needs verification by controlled excavations.

COMPONENTS:

Type Component: None designated.
Excavated components: Ayala Site, Hidalgo County (Campbell and Frizzell, 1949).
Other Components: A. E. Anderson located over 100 sites in Cameron County and made surface collections; he also found scores of sites in northeast Tamaulipas, many of which were relocated by McNeish (1947).

TYPES OF SITES:

Small campsites, usually situated on rises along streams or arroyos; characterized by hearth areas with an abundance of broken shell.

HOUSES:

No data.

LIVELIHOOD:

Use of various sea foods, game animals and wild plant products. No evidence of agriculture.

CERAMIC TRAITS:

All the pottery appears to be intrusive mainly from the Huasteca area (Periods V and VI) on the east coast of Mexico, and to a lesser extent from the Rockport Focus.
Pipes.
Disks.
ARTIFACTS OF CHIPPED STONE:

Projectile Points:
   Arrow Points: *Starr* and perhaps *Fresno* types (stone is rare near coast; chipped artifacts are diminutive and difficult to classify). See also shell artifacts.

Dart Points: *Matamoros* and *Catán* types.

Scrapers: Small, round, humpbacked; and flakes.

Drills: Pointed at one or both ends, vary from 1 to 2 inches in length.

Knives.

Chipped nodules (blades?).

OTHER ARTIFACTS OF STONE:

Abrading stones of pumice.

Sandstone abrading and rubbing stones.

Fragments of rubbed coral.

Large tubular pipes of pumice.

ARTIFACTS OF POLISHED STONE:

No data.

ARTIFACTS OF BONE AND ANTLER:

Bone awls.

Pin-like ornaments of bone.

Bone gorgets.

Tubular bone beads, sometimes incised with geometric designs.

Flaking tools of bone and antler.

Notched pieces of bone.

ARTIFACTS OF SHELL:

Mussel-shell scrapers.

Fishhooks, rare.

Carved pendants of both mollusca and conch shell, with or without decoration. Decorations, when present, consist of geometric designs. Conch shell pendants vary from triangular to square, oval, or unaltered.

Tinklers of *Oliva* beads.

Disc beads from freshwater shells.

Cylindrical conch-shell beads.

Awls.
Coastal Area

Conch-shell gouges.
Conch-shell adzes.
Projectile points from conch columella, round in cross-section, polished to long tapering point and polished and beveled square base.

MISCELLANEOUS TRAITS:
Soft materials probably used as source of pigment.
Hammerstones.
Perforated animal teeth.
Rarely, arrow points made of bottle glass, similar to those of flint.

BURIAL CUSTOMS:
Usually flexed, with or without burial offerings. Offerings, when present, usually consist of beads, pendants, and/or pottery.

RELATIONS:
Huasteca pottery types: *Huasteca Black-on-White, Tancol Polychrome, Tancol Brown-on-Buff* (all from Period VI); *Las Flores Red-on-Buff* and *Las Flores Relief Ware* (all Period V); possibly *Zaquil Red* from Period IV. All probably trade ware from southern Tamaulipas. Ekholm (1944) defines types and periods.
Obsidian suggests trade to the south, in Mexico.
Two jade objects: a spherical bead and celt-like object one inch long, from the south, probably Huasteca region.
*Rockport Black-on-Gray* (?) from Central Gulf coast of Texas.

ESTIMATED AGE:
Beginning date probably sometime after A. D. 1000; extends into early historic times (MacNeish, 1947).

SOURCES:
Anderson, 1932; Campbell and Frizzell, 1949; Ekholm 1944; MacNeish, 1947; Mason, 1935; Sayles, 1935.
SOUTHWEST TEXAS

This section includes the whole southern horn of Texas except for the coastal belt. Its northern boundary is placed at Frio River, a tributary of the Nueces, because the Frio marks a rather sudden shift in archeological material from that characteristic of Central Texas. This entire section of Texas is popularly known as the "Monte", a vast expanse of undulating plain and rocky outcrops of low relief, uniformly covered with thorny brush. It is also called a "mesquite savannah" by geographers, although many other small trees other than mesquite bear thorns and are adapted to the low rainfall, high humidity, and great heat of this region. There are evidences that the mesquite, as in other parts of western and southern Texas, is a recent invader which, because of its extremely long roots, is able to reach a gradually falling water-table better than other plants. Grasses, wild flowers, and prickly-pear cactus are other common plants. Except for the bottomlands of the Frio and Nueces Rivers, there are no oaks, pecans, or other large trees in this region. Cypresses occur along the Rio Grande banks and those of tributary rivers from Mexico. Deer, wolves, jaguars, cougars, and numerous small animals are still found although the carnivores have largely been killed off. Bison and antelope were still found here in the 19th century. Fish abound in the Rio Grande, including the alligator gar; and alligators are still sometimes found.

The first Europeans to enter this area are believed to have been Cabeza de Vaca and his three companions, who, after being shipwrecked on the central Texas coast, survived six years of captivity and hardships, and finally, in the fall of 1534, escaped their captors somewhere south of San Antonio and attempted to reach Pánuco (near present Tampico) overland. After crossing the Rio Grande, more or less in the vicinity of present Lake Falcón or Roma, they came to mountain ranges in what is now eastern Nuevo Leon, rounded them, and decided to explore the country to the other ocean—the Pacific. A reconstruction of their ad-
ventures and route has been prepared for publication by Krieger ("Cabeza de Vaca in Texas and Mexico"). As early as 1583, a permanent Spanish settlement was made within 40 miles of Falcón Dam, at present Cerralvo in eastern Nuevo Leon, and the lower Rio Grande valley became well known to the Spanish by 1600 A.D. Both Cabeza de Vaca and the later Spaniards remark on the extreme density of Indian population in the Rio Grande valley and lands to the south of it, even though these Indians planted no crops. Radical changes in environment are indicated, for the area is now most uninviting and poor in plant resources.

The first known permanent settlements in South Texas were those established by Jose de Escandon between 1749 and 1755 on both banks of the Rio Grande, from Laredo to the delta. However, due to the presence of many Spaniards in the hills and mountains just south of the Rio Grande for over 150 years preceding this time, it is to be expected that historic objects were obtained by South Texas Indians at almost any time between 1583 and 1749.

Numerous surface collections have been made in this region, particularly along both sides of the Rio Grande valley. No formal excavations were made, however, until the University of Texas, supported by grants from the River Basin Surveys of the National Park Service, made a thorough survey of the Falcón Dam reservoir area in Zapata and Starr Counties, between 1950 and 1953. A large monograph on this work, "Archeology, Ethnology, and Early Spanish History of the Falcón Reservoir Area," has been prepared by Krieger and awaits publication. Not only were numerous prehistoric sites found in this survey, but ruins of early Spanish buildings were found in at least 29 locations and records made of them. Prehistoric sites now buried under river sediments were very common, and two of them excavated (Cason, 1952; Hartle, mimeographed report to River Basins Survey). Bulldozers were used to remove the terrace silts.
PALEO-AMERICAN STAGE

No sites in Southwest Texas can be said to belong certainly to this stage. However, no less than 11 localities were found in the Falcón Reservoir area with mammoth bones in deposits which could easily have contained associated artifacts, but these had largely been destroyed by erosion. In one case, a flint chip was found beneath the skull of a mammoth (Cason, 1952, p. 243). A possible association of mammoth and lanceolate projectile point was noted by Jack T. Hughes on the Mexican side of the reservoir in 1950. A fragment of Plainview point and a more or less complete Angostura point were found by Luis Aveleyra and Sra. Sol Rubin de la Borbolla in a site near old Guerrero (now under Lake Falcón), which otherwise contained ordinary artifacts of Falcón Focus (see below). Hughes' survey in 1950 also collected a basal fragment of what is probably a Scottsbluff point, in a site otherwise clearly of Falcón Focus. Mr. Frank Al Weir and Mr. Fred Ruecking, Jr., of McAllen, Texas, have discovered two sites in Starr County north of Rio Grande City, in which there are several fragments of Scottsbluff, Plainview, and Angostura-like points, as well as one that may be a Clovis although its fluting is rather indefinite. The last-mentioned sites also yield large amounts of Falcón Focus material.

As so often in Texas, we cannot determine whether the Paleo-American types of projectile points actually define the presence of this stage, or whether they survived in small numbers into cultural units which belong in an Archaic Stage. So far as the authors are aware, only one true Folsom point has been found in Southwest Texas, a very small specimen from Webb County, association unknown. There is no reason to doubt that this area was occupied in early post-glacial times, and the future definition of this stage is to be expected eventually.

ARCHAIC STAGE

In the Falcón Reservoir area, two foci are recognized as belonging to this stage: Falcón and Mier. They are based
on about 28,000 artifacts collected by the University of Texas and River Basin Surveys projects, and private collections found in the same general area. Excavations proved beyond doubt that Falcón Focus remains are associated with both the Zapata and the Rosita Terraces in this valley, which reach heights of 65-70 feet and 40-45 feet above the Rio Grande's normal level (manuscript by Glen L. Evans). A lower terrace, 20-25 feet above the river, is subject to frequent overflow and no archeological remains have been found within it. Three terrace systems of roughly equivalent heights are widely known in the southwestern United States and Great Plains, where they appear to belong to early, middle, and late post-glacial times in a very general way. We know that the Zapata Terrace must be of considerable antiquity, for the river is never able to overflow it, even during the tremendous flood of June, 1954. Excavations in the Royer Site conducted by Cason were in archeological zones buried as much as 11 feet beneath the original top of this valley fill; therefore these zones were occupied while the valley was still being alluviated up to this high level, and before the fills which are now the lower terraces were ever laid down.

In one of the high-terrace excavations, however, Cason found a small, highly polished pendant of greenish limestone, in place, where it undoubtedly had been buried before the Zapata Terrace reached its full height (Cason, 1952, Plate 30, I). Polished-stone artifacts are never found in a Paleo-American context anywhere in America, but they do appear very widely in the Archaic Stage. None of the Paleo-American projectile-point types mentioned above were found in Cason's Royer Site trenches, although this would have been the proper place for them if the Zapata Terrace were early post-glacial in time. We therefore wonder whether all three of the great post-glacial terraces in this valley are of somewhat more recent date than comparable terraces elsewhere; that is, they may cover no more than 5,000 years rather than 10,000 or so. Terrace dating is not suf-
ficiently refined in Texas or elsewhere to make more exact estimates.

This point is important because of its implications regarding the total time of existence of Falcón Focus and its later descendant, Mier Focus. Not only did typical Falcón artifacts, including large dart points, exist for at least several thousand years, but they appear to have continued in use with virtually no change, right up to the Spanish colonizations in the 18th century. They were even found lying on the floors of stone houses, along with iron, copper, glass, and Spanish majolica ware!

With so little culture change, and such great numbers of simple flint artifacts, it may be implied that Indians of the Coahuiltecan linguistic family occupied Southwest Texas and Mexico across the Rio Grande for several thousand years, never progressing beyond the simplest sort of existence, and never being influenced to any notable extent by developments elsewhere. The notes made by Cabeza de Vaca on the many tribes he encountered between the place of escape and the “river of the gourds” (undoubtedly the lower Rio Grande) agree very closely with this archeological picture of the South Texas “Monte”.

**Falcón Focus**

**COMPONENTS:**

Type Components: Excavations in Sites 78-B9-4 (not named) and 78-B9-17 (Royer Site: see Cason, 1952).

Other Components: About 111 sites in Falcón Reservoir basin in Texas, 20 sites in Mexico, and private collections from LaSalle, Dimmit, Webb, Duval, Zapata, Starr, Hidalgo, Brooks, and other counties.

**TYPES OF SITES:**

Open camps of all sizes, from a few feet across to perhaps 80 acres, in banks of Rio Grande and tributary rivers and arroyos, as well as on rocky uplands well away from any present water. Natural water holes
or "tinajas" are found in arroyos otherwise dry and also have archeological sites nearby. In silty river terraces, occupation sites are thin and separated by layers of sediments, but as many as 11 have been traced in a single bank.

HOUSES:

No archeological data. Cabeza de Vaca describes houses as made of poles covered with mats and carried about from one camp to the next.

LIVELIHOOD:

Hunting of all kinds of game, eating of reptiles, insects, grubs, etc., and preparation of mesquite meal described by de Vaca. He does not mention fishing but this may be presumed from later accounts. Tunas, or prickly-pear fruit were staple food in summer. Archeological sites reveal great abundance of land-snail shells which must also have been a food staple. No animal or fish bones found in sites; de Vaca states that the tribes he met pulverized all such bones and ate them as gruel.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:
Arrow Points: Absent.
Dart Points: Tortugas type most common; also Absolut, Refugio, and possibly Langtry, Shumla, and Almagre. The last three are infrequent and may be late in Falcón Focus or belong to Mier Focus. Types Plainview, Angostura, and Scottsbluff present in four known sites, probably as survivals from Paleo-American Stage.
Large, crude fist axes very common.
Knives: Triangular and leaf-shaped very common, with bases convex, straight, and concave.
Scrapers: Heavy side scrapers common, oval scrapers less so. Heavy end scrapers common, with bits convex, straight, and concave (the latter are also called...
“gouges”). End scrapers made across broken edges of knife blades common.
Pick-like tools: Like fist axes but smaller in diameter and chipped to a sharp point.
Gravers, very rare.
Drills, very rare.

ARTIFACTS OF GROUND STONE:
None definitely associated. Wooden pestles used in dug pits described by de Vaca for grinding of mesquite beans.

ARTIFACTS OF POLISHED STONE:
One small pendant with two holes at each end definitely associated.

ARTIFACTS OF SHELL:
One small circular bead fragment.

ARTIFACTS OF BONE AND ANTLER:
None.

MISCELLANEOUS TRAITS:
Polished stream pebbles found in all sites. Some are white quartz and egg-shaped; others are oblong and flat on at least one side, of all materials found in gravels except flint. Definitely carried to sites for some purposes. Egg-shaped ones may have been charms or amulets; flat ones possibly once painted (see Pecos River Focus), but if so, no traces of paint remain.
Fossil shells and concretions, probably also picked up as charms.
Scraped pigments of hematite, limonite, and chalk.

BURIAL CUSTOMS:
Three flexed skeletons found but lack of artifacts prevents association with definite complex.

RELATIONS:
Tortugas and Abasolo dart points shared with Central
Texas Aspect, Pecos River Focus, Aransas Focus, and several complexes in Tamaulipas.

*Langtry, Shumla,* and *Almagre* points, if they belong to this focus, show relationship with Pecos River Focus. *Almagre* points found southward into southern Tamaulipas.

Lack of stone grinding implements is unique in Texas archeology.

**ESTIMATED AGE:**
Possibly 5000 B.C. to 500 or 1000 A.D.

**SOURCES:**
Krieger and Hughes (mimeographed preliminary report, 1950); Hartle (mimeographed report on Site 78-B9-4 (1951); Cason, 1952; Krieger, manuscript.

**Mier Focus**

This complex will not be described in detail, as it represents the continuation of Falcón Focus traits plus the following changes: *Tortugas* and *Abasolo* points continue, but alongside of them are distinctly smaller counterparts of the same shapes and with beveled edges, named *Matamoros* and *Catán* points by MacNeish in Tamaulipas; tiny arrow points appear, of the *Fresno* and *Perdiz* types known widely in Texas, and a local type with three concave edges named *Starr* points; the *Langtry, Shumla,* and *Almagre* points already mentioned for Falcón Focus possibly belong to Mier instead; and a half dozen stone pestles found in prehistoric sites may belong to this focus.

While this is admittedly scant evidence for another focus, it has some justification in that the *Matamoros* and *Catán* points do have chronological significance in the coastal section of Texas. They occur in the pre-ceramic Aransas Focus and probably continue into association with pottery in Rockport Focus; they occur in the Río Grande delta area in Brownsville Focus, where Huastecan pottery occurs as trade ware (information from Campbell). In southern
Tamaulipas, the two large types Tortugas and Abasolo are pre-ceramic, whereas their two descendants, Matamoros and Catán, are found in pottery levels (information from MacNeish). Tortugas and Abasolo points occur widely in Central and Western Texas, but the smaller Matamoros and Catán points do not. The appearance of the latter two types may therefore be expected to mark a certain time horizon in the Falcón area. Probably the small arrow-point types also have chronological significance and appeared later in this area than the Matamoros and Catán points; still they must have been pre-European.

A Mier Focus is thus transitional between Falcón Focus and the historic horizon. It might also be regarded as a late phase of Falcón Focus.

NEO-AMERICAN STAGE

This is not present in Southwest Texas. The native tribes remained without agriculture or pottery until they were taught these arts by the Spanish friars. The bow and arrow alone would be insufficient reason to establish this stage.

HISTORIC STAGE

Indians of the Coahuiltecan stock were once quite thickly populated along the Rio Grande from Eagle Pass downward, and along its Mexican tributaries. For over 200 years they bitterly resisted Spanish enslavement and encroachment on their lands. In spite of this, the friars managed to pacify some of them, teaching them Spanish arts and crafts (pottery-making, stone masonry, carpentry, smithing, etc.), and irrigation agriculture. Certainly by the middle 18th century there were some thousands of "civilized" Indians, not only around the missions, but back in their native homes as well. After 1800 they rapidly became extinct due to depredations of the Apache and Comanche and taking sides in various wars: Mexico's independence from Spain, independence of Texas from Mexico, the United States' war with Mexico, and even the Civil War. The Coahuiltecan
Southwest Texas

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stock is believed to have been totally extinct for at least 50 years.

This interesting history of acculturation is partly reflected in the archeological work in Falcón Reservoir basin, where 29 ancient stone buildings were identified, measured, and photographed before the lake rose over their ruins. Excavations were made in six of them, and in four were found mixtures of Indian and Spanish artifacts on the floors. This indicates that the houses themselves were in some cases built by Indians after Spanish instruction. Great amounts of a peculiar pink pottery were found in such sites, not wheel-made and easily distinguished from the wheel-made, glazed, and painted wares made by the Spanish themselves.

While no evidences of irrigation ditches were found for the colonial period in the Falcón area, it is likely that agriculture was learned by at least some of these Indians.
EAST TEXAS

East Texas is herein defined as all of the State lying east of the middle course of Trinity River, southward to the Coastal Area, and northward to Red River. It is a uniform natural geographic province, quite distinct from the rest of Texas, and contains extensive forests of hardwoods and pines. Before the white man destroyed much of the forest for agriculture, it was even more extensive. With its subhumid climate and vegetation it is a natural part of the forested Eastern United States in general. Several species of oak, elm, ash, hickory, gum, pine, etc. are the dominant trees. Toward the west and northwest this part of Texas becomes increasingly open prairie.

No part of East Texas rises more than a few hundred feet above sea level, hence it is technically within the Coastal Plain physiographic province. The actual coastal strip of flat, sandy ground extends inland some 60 to 80 miles and is within the Coastal Area as we have defined it in that section. Farther inland, in East Texas proper, the country is rolling to hilly with numerous shallow alluvial valleys and many streams. This part of Texas also conforms to a distinctive archeological province, namely, the "Caddoan Area". This extends beyond the boundaries of East Texas, embracing large portions of Louisiana, Arkansas, and Oklahoma in addition.

Almost all of the historic native tribes of the "Caddoan Area" spoke dialects of the Caddoan linguistic stock and possessed a generally similar culture. They were skillful farmers and lived in permanent villages of well-made houses; the walls were of poles set upright and covered with wattle which was then plastered with clay. Their ceramic arts were among the finest of the New World, not only in variety of vessel forms, but in techniques of decoration and an almost limitless variety of patterns (see Plates 1 to 70).

Archeological material in East Texas which precedes the Caddoan in the pre-ceramic Archaic Stage is also notably distinctive from the rest of Texas; it shows affiliations with
the Archaic Stage of Louisiana, Arkansas, eastern Oklahoma, and the rest of the Eastern States, whereas to the west there is a sharp difference with the Archaic of Central Texas. Thus a strong break in artifact types and cultural development seems to have existed for a long time—probably for two or three thousand years or more—in the lands to the east and west of Trinity River. This may have been due to the strongly different natural environment in these two sections, but if so, this environmental difference was much less effective in glacial and early post-glacial time, for in the Paleo-American Stage, East Texas shows nothing very distinctive from the remainder of the State.

**PALEO-AMERICAN STAGE**

Only one excavated site may possibly be associated with this stage, the Malakoff Site in Henderson County, where three large stones have been found, carved into crude but definite semblances of human heads (Sellards, 1930, 1941). This remarkable discovery has not received due attention from students of ancient man in America, and has been ignored in practically all compilations of “Early Man” culture traits. In 1929, the first of these carved heads was found by a gravel contractor at the bottom of a pit in a terrace overlooking Cedar Creek, a tributary of Trinity River in Henderson County; it was briefly described by Sellards (1930).

In 1935 a second head was found by another gravel contractor, and in 1939 the third one was found during an excavation for recovery of Pleistocene fossils by a project conducted by the Texas Memorial Museum and WPA. The third pit was close to the first one of 1929, but the second was about 1,000 feet from them. In all three cases the heads rested on bedrock at the base of Terrace C of Cedar Creek and nearby Trinity River. The circumstances of discovery were open to question and it seemed possible that the heads had been carved and buried by modern people as a fraud or joke. However, the details of the heads themselves, and the circumstances of discovery, and the integrity of the per-
sons involved were carefully investigated by Evans and Sellards, and the case appears to be conclusive that these heads were carved by human beings well within the Pleistocene period. The first and second are sandstone concretions weighing 98½ and 63½ pounds, respectively; the third is a sandstone boulder weighing 135 pounds. Pleistocene vertebrate fossils lay above the carved heads in each case, in finely laminated gravel and sand which was in primary deposition. Significantly, these gravels are all quite fine, with few stones more than fist-size, none anywhere near approaching the size of the heads. In Pit 1 were remains of the Columbian mammoth, extinct horse (Equus compli- catus), and a sloth of unknown species. In Pit 2 the same species of mammoth and horse were found, and sloth of genus Megalonyx. Pit 3 produced a fossil tapir. A fourth pit, dug through the same terrace to bedrock some distance away, produced mammoth, mastodon, horse, camel, llama, bison, beaver, sloth, peccary, and wolf—all of Pleistocene species now extinct—as well as other species which have survived to modern times. While the lack of evidence of human occupation or other artifacts is a distinct handicap in this case, the heads unquestionably were carved to represent human beings, although very crudely. The eyes, nose, mouth, and ears are shown and still fairly well preserved. Sellards (1941) illustrates two of them. The conclusion seems inescapable that the three heads, lying below undisturbed terrace deposits containing the fauna listed above, must date well before the end of Pleistocene times.

East Texas reveals scattered occurrences of the usual Paleo-American projectile-point types, but in contrast to the rest of Texas, the Scottsbluff type is most common. At least 50 are known in private collections and doubtlessly many more would be revealed in a thorough survey. The Scottsbluff type is also relatively common in northern Louisiana, particularly from sites in sandy upland country; quite probably they have become buried by sedimentation in the big valleys and, although present, practically impossible to find. Most collectors, while unable to supply details, feel
that **Scottsbluff** points are of different origin from the general Archaic material, perhaps because they are often heavily patinated while the Archaic artifacts are not. Some specimens have been found on sites mainly Archaic, others are isolated finds. One has appeared in a grave in an Arkansas Caddoan site (Harrington, 1920, Pl. CIX, d), probably having been picked up by later people.

The same lack of specific information applies to finds of other types. The **Plainview** and **Meserve** types (very similar except that the latter has beveled blade edges) lumped together about equal the **Scottsbluff** points in frequency, so far as the writers have been able to determine. These types likewise sometimes are found on sites of Archaic material, sometimes in isolated places. The **Eden** type of the High Plains is never seen this far east. A few possible examples of **Angostura** points have been noted.

**Fluted points** are very rare in East Texas. True **Folsom** points are unknown and the **Clovis** type is represented by only seven or eight specimens in our present incomplete records. Curiously, **Clovis** points are much better represented farther east, in northern Louisiana, where they come from sandy upland locations (some fine ones are displayed in the Louisiana Exhibit Building in Shreveport, together with **Scottsbluff** and **Plainview** points). A fragment of fluted point was found in mound fill at the Davis Site (Alto Focus) in Cherokee County (Newell and Krieger, 1949, Fig. 57 v); and two bases of **Clovis** points were found during excavation of the Yarbrough Site near Grand Saline in Van Zandt County by the University of Texas and WPA. The Yarbrough Site had purely Archaic material in its lower levels and potsherds from several Neo-American complexes in its upper levels. The two **Clovis** fragments were not in positions that would connect them definitely with either of these divisions; as so often in Texas, the conditions of discovery do not permit a decision on whether the early types actually continued to be manufactured into much later periods, or were picked up as curios by later people, taken to their villages, and perhaps even used over again.
ARCHAIC STAGE

East Texas Aspect

Nothing on this Stage in East Texas has ever been published. It is unquestionably present, however, wherever collecting has been done by amateurs and formal surveys have been made by professional archeologists. As this includes virtually every county in this part of Texas, this Stage constitutes a very important chapter in the State as a whole, covering a large amount of material and at least two or three thousand years’ time. A major publication on it is urgently needed.

It is commonly said by amateur collectors in East Texas that they find more sites without pottery than with pottery, which is saying a great deal if one considers the hundreds of sites which do have pottery. The most common class of artifacts is that of dart points of many types, other artifacts being rare in comparison. The most common dart-point types are not found in any quantity in other parts of Texas west of the Trinity River valley, but some extend southward to the eastern end of the Coastal Area. Conversely, some of the projectile-point types found very commonly in Central Texas fade out rapidly east of the Brazos and Trinity Rivers, constituting a very minor quantity in East Texas, if present at all. Most of the Central Texas projectile-point types do not occur and there are sharp distinctions in other categories of material culture as well. This appears quite strange in view of the probability that Archaic peoples lived much the same life, in general, from one end of Texas to the other. That is, they must all have existed by hunting, fishing, and collecting wild plant foods; have lived in small family or band units which roamed over a small area around a more or less stationary village site; possessed only a simple social organization; and had a much wider range of weapons, implements, and utensils than their predecessors in the Paleo-American Stage.

If, as we suspect, these Archaic peoples lived from perhaps 3000 B. C. to 500 or 1000 A. D. in Texas, why was this
strong distinction in material culture between the East and Central areas maintained so long? While we cannot answer this question, it is certain that the East Texas Archaic material connects with the Eastern United States in general (and with Louisiana, Arkansas, and eastern Oklahoma in particular) more closely than with the rest of Texas. We thus use the term “East Texas Aspect” in contrast to “Central Texas Aspect” of the Archaic Stage or pattern. A detailed comparison of types and frequencies from surface collections might well reveal sufficient distinctions for the definition of two or more foci, but as in the case of Central Texas Aspect, more profound differences than shifting frequencies of a few projectile-point types will be needed to establish distinct foci.

There are also notable distinctions from the Archaic remains east of the Mississippi River in that polished-stone artifacts are comparatively rare. Beautifully shaped and polished boatstones and bannerstones, stone pendants and beads, plummet stones, etc., occur westward in impressive quantity to the Red River valley in southwest Arkansas, but as soon as one enters Texas they become very rare. For this and other reasons, the East Texas Aspect would appear to be distinct from Archaic complexes east of the Mississippi. Whether or not it is also distinct from manifestations of this Stage in Louisiana and Arkansas is difficult to say. The material described by Webb (1946, 1948 b) from northern Louisiana provides general similarities, as does that described by Harrington (1920, pp. 103-110) from the Gulpha Site in Arkansas. Too much is involved, however, for any sound conclusions to be made as yet.

A provisional trait list of artifacts is given below. Nothing is known about dwellings or burial practices; no study has been made of the size of villages. Artificially constructed mounds are in all probability absent. Shell middens—so prominent a trait for the Archaic people farther east—are entirely missing in East Texas, so far as the authors are aware. Shell fish were consumed, for their shells
are found in these sites, but not in notable accumulations. There is no indication of agriculture, but numerous sites which lack pottery do have small arrow points on them, of the *Alba* and perhaps other types. The bow and arrow thus seem to have entered this area somewhat in advance of pottery and agriculture, but arrow points do not become frequent until the Neo-American Stage.

Dart Points: *Gary* type most frequent in all parts. *Yarbrough*, *Wells*, *Kent* most common; *Morrill*, *Trinity*, *Carrollton*, *Elam*, *Edgewood*, *Ellis*, *Darl*, *Palmillas* less so. Some types common in Central Texas Aspect, such as *Bulverde*, *Williams*, *Uvalde*, *Lange*, *Lerma*, and *Ensor*, occur occasionally and decrease in frequency toward the east; some may be intrusive but others are made of local flints and cherts. *Tortugas* points extend into East Texas at the Davis Site in Cherokee County, made of local flints. Most of the resident types are made of either reddish-brown chert or gray and yellow flints in varying proportions, but *Ellis*, *Edgewood*, and *Bulverde* are nearly always of flint. *San Patrice* points, described in Lousiana (Webb, 1946) occur rarely.

Spear Points: The *Pogo* type appears to be much too large and heavy for use with the atlatl, and is the only type of this size in Texas. Many of them are of novaculite, obtained from western Arkansas or eastern Oklahoma; others are flint, chert, and ferruginous sandstone of local occurrence.

Arrow Points: *Alba* and perhaps other types.

Drills or awls of chipped flint, usually with T-shaped base, those re-chipped from broken projectile points being almost unknown.

Tiny fist axes, chipped to sharp point.

Heavy end scrapers, plano-convex, with concave bit at one end (so-called "gouges"), usually of brown ferruginous sandstone.

Small plano-convex snub-nosed end scrapers with convex bit; of flint; very rare.
Small end-scrapers, bi-convex, made by chipping across the broken blade of projectile points. They are thus of whatever material the original point was made, and retain the stem for use as a handle. Very rare.

*Albany* type of scraper, assymetrical, with stem (described by Webb, 1946); rare.

Full-grooved axes of fine-grained pale yellow sandstone and quartzite, hard materials which made the axes useful for chopping.

Full-grooved axes of hematite, often well polished but too fragile for use in chopping. It may be suggested they served as a medium of exchange.

Slabs of ferruginous sandstone with small hemispherical pits; for cracking nuts?

Small milling stones of ferruginous sandstone, sometimes with similar small pits around sill or on under side.

Small manos, generally unshaped, of ferruginous sandstone and quartzite, sometimes with a small pit in center of the grinding surface.

Tubular beads, of ferruginous sandstone and perhaps other materials; rare.

Boatstones; very rare; probably imported.

Bannerstones; very rare; probably imported.

Pigments of hematite and limonite.

**NEO-AMERICAN STAGE**

By far the richest archeological remains in East Texas are those of the Neo-American and Historic Stages. In this area these terms are practically synonymous with the material culture of the prehistoric and historic Caddoan-speaking Indians. The earliest investigators, such as Clarence B. Moore (1908, 1909, 1912), and Harrington (1920), who published their findings, worked in northwest Louisiana and southwest Arkansas, doing a great amount of digging in mounds and burial grounds. Besides recovering valuable data on the size, shape, and method of constructing mounds,
and mapping mounds in relation to village areas, these investigators obtained huge amounts of fine pottery and other burial offerings. While Moore usually carefully noted those objects which came from individual graves, he selected only a few of the best vessels and other artifacts for illustration. For many graves he merely noted that “great masses of broken pottery were piled in the corners” or a similar generality; an analysis of his collections provides a fine research project which no one has yet attempted. Harrington illustrated numerous vessels but did not give grave data on any of it.

Due to this lack of specific analysis, despite the amounts of material recovered, the idea was perpetuated for many years that all “Caddoan” culture constituted a single unit occupying a short period of time, either on the historic level or very close to it. This supposed unity was continued in the work of Ford (1936) in charting the cultural remains of Louisiana. As recently as 1951 and 1952, Ford’s publications continued to insist on the placement of all Caddoan remains at the top of the chronological column for Louisiana.

The term “Caddoan” has been used in all four states of Louisiana, Arkansas, Oklahoma, and Texas wherever elaborate pottery has been found which contrasts with that of surrounding regions in its range of vessel forms and decorative techniques. The most striking of these techniques, if not always the most frequently seen, is that of “engraving”. Whereas incised designs were made in still-plastic clay before drying and firing, engraved designs were cut through the finished, polished surface. The lines were made to contrast more strongly with the background by rubbing red ochre into them; the ochre has nearly or completely disappeared from many vessels, but in others may be found nearly intact. White pigment was used quite often in some foci, never in others. Pale blue pigment, and rarely green, were also used in a few foci.

In embracing large parts of these four states, Caddoan archeology may be fairly compared with that of the Pueb-
loan culture pattern in the Southwest United States, in area and time depth if not in complexity. On the other hand, controlled excavations in the Caddoan Area do not equal one one-thousandth part of what has been accomplished in the Southwest; and whereas the Southwest has been systematically explored for many years by scores of professional workers and hundreds of assistants as a full-time occupation, the analytical work in Caddoan archeology has all been done by not more than six persons, each devoting but part of his time to it. A single “amateur”, Dr. Clarence H. Webb, has done nearly all of this in northern Louisiana and aided greatly in evaluating work in the other states.

Caddoan remains form a part of the great Mississippi culture pattern, which once covered most of the Southeastern United States and much of the Middle West. Among other traits, this pattern was featured by an intensive development of agriculture, considerable population density, town life and complex social structure with priest and warrior castes, some large ceremonial centers, and the building of “temple mounds”. These mounds were very numerous in some areas and occasionally reached enormous size, reflecting control over considerable labor forces. Unlike those of Middle America, these mounds were never constructed with stone. They were erected entirely of clay carried by basket-loads, usually but not always from large excavations termed “borrow pits”. As a general rule they are square or rectangular in shape, with flat tops, steep sides, and once had stairways on at least one side, made of hardened clay or logs. There are, however, many different forms of temple mounds, some with one or more platforms on their sides, others with small “super-structure” mounds erected on their flat tops, and their shapes may be more like a T or L in some cases than square. If there is a single trait generally diagnostic of the Mississippi Pattern, it is the clay temple mound. In spite of this, no study of these mounds, variations in size and shape, or comparisons with the thousands known in Middle America, has ever been undertaken. Their function, like that of Middle American mounds and pyramids, is
presumed to have been that of a raised stage on which
important ceremonial events, prayers, rituals, dances, and
the like were performed.

In East Texas, true temple mounds are of rare occurrence, not more than 15 being known to the writers. They are also rare in eastern Oklahoma but become more common in Arkansas and Louisiana, and still more common in the Mississippi and other eastern valleys. The majority of East Texas Caddoan-speaking tribes, throughout several centuries of their history, therefore got along without mounds. However, in their general material culture, large and substantial houses, elaborate ceramics, burial of the dead with copious offerings, stone and pottery pipes, ornaments of shell, effigy pipes and vessels, and many other traits, their culture plainly belongs to the Mississippi Pattern. The trait lists of various foci which follow will give the reader a fair view of the level of culture attained by these people.

In 1941, after WPA excavation crews had been exploring Caddoan archeological sites for several years in Texas, Oklahoma, and Arkansas, comparative analysis was begun by Krieger, who examined sites in these states and Louisiana, the WPA reports and many others made previously, as well as the published papers. Dr. Webb was a constant collaborator with his wide knowledge of Caddoan archeology. In 1943 the first results were briefly reported at the Third Round Table Conference in Mexico City (Krieger, 1944 b). Twelve foci were outlined, with more anticipated. These were grouped into two aspects, each forming a distinct general time period: the Gibson and Fulton Aspects. Foci of the Fulton Aspect were found in all four states to occupy a later time period than the Gibson, in stratigraphic position in a few sites, and otherwise linked together by common possession of certain traits as well as by trade pottery.

Any discussion of Caddoan archeology in East Texas must be considered in relation to the whole four-state area, or one lacks perspective on how these cultural units acted upon one another. The Gibson Aspect included five foci:
Alto in Texas and Louisiana; Gahagan in Louisiana; Haley in the adjacent corners of Arkansas, Texas, and Louisiana; Spiro in eastern Oklahoma plus one site in Arkansas and two in Texas; and Sanders in Texas and Oklahoma on both sides of Red River. The Fulton Aspect included seven foci at first: Titus, Frankston, and Shelby in Texas; Belcher in northwest Louisiana and the adjacent corner of Arkansas; Texarkana in the adjacent corners of Texas and Arkansas; McCurtain (defined by Baerreis) in southeast Oklahoma and adjacent Red River valley in Texas; and Glendora in Texas, northern Louisiana, and a small part of eastern Arkansas. Of these, only the Glendora was recognized as belonging to the historic period, associated with European trade goods; and it was the most widespread of all twelve.

The original concept of Gibson Aspect has borne up fairly well to the present day. New work in eastern Oklahoma by Bell, however, has revealed some material which belongs to the Aspect but is difficult to assign to any of the five foci, so that one or more new ones may be indicated. In some sites, however, the material may simply constitute mixtures of traits, as inevitably happens. Bell and Baerreis (1951, pp. 48-53) outlined a Nelson Focus on the basis of two excavated sites in Choctaw County, Oklahoma, north of the Sanders Site in Lamar County, Texas, type site for Sanders Focus. They state than only six pottery vessels were found in three graves; that most of these vessels and the sherds from the village area are of Sanders Focus types; and that the Nelson Focus may actually be primarily a Sanders Focus occupation with admixtures of Spiro Focus pottery and other traits. Since all these foci are known to have shared some traits (which is the reason they are grouped into “aspects”), it appears doubtful that the Nelson Focus is a distinct complex. The two sites, so near those of Sanders Focus components in Texas, may simply belong to Sanders Focus, with a somewhat greater Spiro admixture due to their position closer to Spiro Focus components in Oklahoma, as one would expect.

A general comparison of the Gibson Aspect foci, their
similarities and differences, affiliations with other cultural units in the Eastern United States, and certain lines of evidence pointing to an origin of Mississippi culture elements in southern Mexico (or even in Guatemala), have been discussed by Newell and Krieger (1949, pp. 193-219).

The Fulton Aspect has undergone several changes. The “Shelby Focus” was dropped or rather incorporated into Webb’s Bossier Focus, components of which occur widely in northern Louisiana but less so in extreme eastern Texas. A ceramic complex in the Ouachita River valley of southwest Arkansas, described by Dr. and Mrs. T. L. Hodges (1943, 1944-45), became the basis for a Mid-Ouachita Focus at the suggestion of Dr. Webb. A Fort Coffee Focus was added in eastern Oklahoma by Orr (1946). Lehmer (1952) added a Turkey Bluff Focus in the same general area. Whereas Krieger (1944 b; 1946) had considered Frankston Focus in the central part of East Texas as primarily prehistoric but extending into historic times, it was later decided to establish an Allen Focus for the historic material (Newell and Krieger, 1949, p. 191). Frankston is now considered entirely pre-European.

Thus two of the 11 Fulton Aspect foci are now considered to represent the historic Caddo tribes: Allen Focus for the Tejas (Hasinai) Caddoan-speaking tribes; and Glendora Focus for the Cadohadacho and their neighbors in the Red River valley and lands farther east. Most of the Fulton Aspect prehistoric foci reveal traits which unquestionably developed directly into those of the historic Caddo. Two sites in Cass County known as the Hunt and Clements Places also have produced a few objects of iron and glass beads in graves with highly developed pottery. Their particular pottery types and other artifacts do not agree well with either Glendora or Allen Focus, so that an additional Hunt Focus may eventually be defined. At present, however, we consider the two sites to provide a transition between Titus and Texarkana Foci on the one hand, and historic Glendora on the other.
The list for both Aspects now stands:

**Gibson Aspect**

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<tr>
<th>Foci</th>
<th>Allen*</th>
<th>Belcher</th>
<th>Bossier</th>
<th>Fort Coffee</th>
<th>Frankston</th>
<th>Glendora*</th>
<th>Turkey Bluff</th>
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**Fulton Aspect**

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* Historic period, 1650 A.D. and later.

No further mention of the Nelson, Fort Coffee, and Turkey Bluff Foci will be made herein, as none are directly involved in East Texas archeology, and the available information on them appears in the references cited above. The others either are represented by components in Texas or are instructive in determining the closest relationship of the Texas units.

It is still very difficult to arrive at reasonably accurate datings for Caddoan archeology. The first estimates (Krieger, 1944 b) are now considered naive, for they were made simply to conform with the estimates then current in the Southeast and Middle West. In the past five years, Carbon 14 age determinations and more serious considerations of the whole scale of development of native culture in the Eastern United States have brought about a general lengthening of the previous overly conservative estimates. For example, the Hopewellian culture in the Middle West was once confidently “dated” at 1000 to 1200 A.D. and the entire Mississippi culture “dated” at 1200 to 1500 A.D. or even from 1400 to 1700 A.D. Carbon 14 dates have now been obtained on several Hopewellian sites which consistently fall between 300 B.C. and the time of Christ. While still open to argument, there has lately been a strong tendency to accept this date. If Hopewellian can be set back by 1300 years, one naturally expects that Mississippian culture also must be set back; but no two persons will yet agree on how much. A backward extension of Mississippian dates certainly allows a
great deal more freedom for the development of its many locally specialized manifestations, the tremendous spread of temple-mound construction and agriculture depending on advanced races of maize, the many distinctive ceramic complexes within the Mississippian tradition, and so on.

The question of dating Gibson and Fulton Aspect foci thus is not a local problem, but one and the same with that of gaining better perspective on the whole Mississippian pattern. In East Texas there are no evidences of Woodland or Hopewellian culture intervening between the Archaic and Mississippian remains, which means that the Archaic Stage must have lasted longer in East Texas than it did east of the Mississippi valley. Thus the Archaic dates in other areas which indicate occupancy from about 3500 to 500 B.C., if directly applied to East Texas, would mean that Mississippian culture appeared as early as 500 B.C. because there is no real break between the two. Many Archaic traits in East Texas, particularly the same projectile-point types, continued in use among peoples of the Gibson and even the Fulton Aspect, so we cannot postulate a long period of depopulation between them.

An initial date of 500 B.C. for the beginning of Mississippian culture in East Texas (the Gibson Aspect in this case) would, on the other hand, be very hard to believe. One Carbon 14 determination has been obtained on the Alto Focus, which we regard as the earliest Caddoan unit. This is approximately 400 A.D. ± 175 years (Krieger, 1951 a), obtained on charred corn from a house floor under the Davis Site mound. There is some reason for accepting this as the approximate beginning date of the Neo-American Stage in East Texas, because the Davis Site also revealed evidence of trade in the form of potsherds derived from the pre-Mississippian Marksville complex in Louisiana, and because of certain traits held in common by some Gibson Aspect foci and late Hopewellian culture (of which Marksville forms a part).

Others, such as Ford and Griffin (in Phillips, Ford, and
Griffin, 1951; and Ford, 1951, 1952) argue that these relationships and trade pottery are irrelevant and the Mississippian culture must be dated much later. Griffin would correlate Alto Focus with the Coles Creek complex in Louisiana at perhaps 900 A. D.; Ford prefers a correlation with the Plaquemine complex at about 1200 A. D. although no one else would now insist on such a late dating. What is needed is not more guesswork but better analysis of the whole Mississippi Pattern in its early and late phases everywhere, and many more Carbon 14 dates. For the present, an "estimated age" on each of the following trait lists can only be regarded as a reasoned guess. The pre-European Fulton Aspect foci have, for the most part, been allotted a span of about 1200 to 1500 A. D. In each case the focus may have come into existence somewhat earlier or somewhat later than 1200 A. D., or it may have lasted until perhaps 1600. After about 1600, however, we have to allow for the possible appearance of European material among the Caddo tribes through a purely native trade network from New Mexico or northern Mexico (see Historic Stage, below). We should also point out that if 1200 A. D. seems too early a beginning date for Fulton Aspect units, there are three known cases of Coles Creek trade sherds: one from the A. P. Williams Site, a pure Titus Focus component in Titus County, and two from the Texarkana Focus component of the Hatche! Site in Bowie County.

For Gibson Aspect foci, we have entered estimates like

1. As this goes to press we note the announcement of four Carbon 14 age determinations on wood from the central tomb of the Craig mound at Spiro, Oklahoma, type component for Spiro Focus (Oklahoma Anthropological Society, Newsletter, Vol. 4, No. 1, April 1955). These were determined in the University of Michigan laboratory. Three runs on Sample 14 gave 2400, 1800, and 2030±500 years, which in our calendar would be about 450 B. C., 150 A. D., and 100 B. C., respectively. One run on Sample 54 gave 640±250 years or about 1300±250 A. D. While the first three dates are not extremely divergent and come rather close to those now accepted for Hopewellian culture in the Middle West (there are several traits in common between Spiro and Hopewell), the fourth makes the true date of Spiro even more puzzling. Further determinations will be needed for a decision.
“500 to 1000 A. D. or part thereof” to indicate that we do not know the dates any more exactly. Each focus is not supposed to have lasted anything like 500 years, but to have existed during some part of this span. The Haley, Sanders, and Bossier Foci provide transitions for which even these estimates are difficult to apply; we have said “about 1000 to 1200 A. D.” for want of more definite information.

In the type descriptions of Caddoan pottery (Plates 1-70) two items have been omitted in order to fit the pages. Under “Paste” the first item should in each case be “Method of Manufacture: Coiled”. All Caddoan pottery was made by a coiling method—that is, by adding rolls of clay in a continuous spiral from the base upward to the lip. Hardness has been omitted as well, for it ranges between 1.5 and 2.5, and averages 2.0, for nearly all Caddoan pottery. A few exceptions have been noted in the description.

A conference on pottery typology was held at the home of Dr. Clarence H. Webb in Shreveport in August, 1950, attended by Webb, W. G. Haag, J. L. Cotter, L. E. Howard, R. L. Stephenson, and A. D. Krieger. Many Caddoan types were reviewed with specimens and photographs, most of those previously established by Webb and Krieger being accepted with little modification. Several new ones were defined which, if not published until now, bear a notation under “References” that they were established at the Shreveport Conference in 1950. One type, Wilkinson Punctated, was considered invalid because it consists mainly of fingernail-punctated jar-body sherds from vessels which bore other decorations on their rims, and are thus now classified under other types.

In the trait lists below, we present only the barest outlines of the complex ceramics and other features of culture. Many minor groups of pottery have been omitted, and the utility pottery of most foci remains to be analyzed more thoroughly. Most Caddoan foci are most readily recognized through their engraved types and others of special nature. The general absence of plain types herein is due to the fact
that, with one exception, Caddoan foci simply do not have much completely undecorated pottery; the proportion is generally less than five per cent, and sometimes only two or three per cent. Plain vessels, when they do occur, reveal practically all the forms present in the focus as a whole. The notable exception is Sanders Focus, in which about 60 per cent of the total is plain and included in one type: Sanders Plain. The type McKinney Plain of Texarkana Focus is also described and illustrated here because its form differs from other types in this focus. Tracing the history of developments within this framework must await another publication; this study will only provide some orientation for the student.

**Alto Focus (Gibson Aspect)**

The definition of this focus is based primarily on excavations made by the University of Texas and WPA in 1939-1941 at the George C. Davis Site in western Cherokee County. An extensive monograph has been published (Newell and Krieger, 1949), to which the reader is referred for details on all the cultural material as well as on the relationships of Alto Focus with other foci of Gibson Aspect, the southeastern United States, and cultures of southern Mexico and Guatemala.

The Davis Site is located on a large alluvial terrace called Mound Prairie, about one mile east of the Neches River bridge on State Highway 21. It contains three mounds surrounded by extensive village areas, and like many Gibson Aspect sites, appears to have been an important economic and ceremonial center. Only the largest of the three mounds, an L-shaped, flat-topped structure, and the village area adjacent to it, on the south side of the highway, were excavated. Despite the extent of these excavations, no evidence of graves was encountered. No evidence of cremation was found either, hence it is certain that the dead were disposed of in the vicinity in some way yet to be discovered. This lack of data on burial method and the nature of mortuary offerings, which were quite elaborate in other Gibson Aspect
foci, poses a considerable handicap in comparing Alto Focus with them. The graves of Gahagan Focus in northwest Louisiana contained few pottery vessels, but all of these are of types common in Alto Focus; therefore it is possible that the burial complex described herein for Gahagan Focus was more or less paralleled at the Davis Site.

Components of Alto Focus have been found over a very wide area reaching as far west as the Brazos River at the Chupek Site above Waco (Watt, 1941) and as far east as north-central Louisiana. However, such sites are exceedingly few in number for the extent of the area in which they occur. Most include at least one mound definitely of artificial construction, but west of the Neches River valley no true mounds are known to us.

The Davis Site occupation was divided into three phases, with certain changes in the comparative popularity of certain pottery types, the house patterns, and miscellaneous artifact types (Newell and Krieger, 1949, pp. 186-192 and Tables 1-19). The traits below are lumped for the entire occupation.

COMPONENTS:

Type Component: George C. Davis Site, 6 miles west of Alto, Cherokee County.

Other Components: McDonald Site, Anderson County; Keith and Hale Sites, Titus County; Chupek Site, McLennan County (Watt, 1941); Site 9 in survey of David Wilson, Brazos County; Mound Plantation, Smithport Landing, Wilkinson, Allen, Colbert, and Greer Sites in northwest Louisiana (Webb, 1948). Most of these are briefly discussed in Newell and Krieger, 1949, pp. 196-197. The Greer Site in Louisiana is not the same as the historic Greer Site in lower Arkansas River valley (Moore, 1908). The Allen Site in Louisiana is not the same as the type site for Allen Focus in Cherokee County, Texas.

TYPES OF SITES:

Large village areas around mounds. In some cases, both
East Texas

temple mounds and burial mounds present; in others, only a single temple mound. From Neches River valley westward to middle Brazos River are a few small sites with village refuse but no mounds; none has been excavated.

HOUSES:

Floor plans round, oval, and square with diagonal corners at Davis Site, found in village area and at different levels inside the mound. Features include centerpost (evidence that house was constructed in some cases around living tree as centerpost, then tree cut down and house stood without central support); fire basin more or less in center of house, sometimes clay-lined; scattered posts or props; shallow cache pits, oval and with step at one end, lined with hard clay; entrance gained through any of several gaps in walls; entranceway passage in a few cases indicated by parallel trenches; wattle and plaster walls; and (presumably) thatched grass roofs. Houses probably very substantial and ranged in diameter from 21 to 50 feet.

EARTHWORKS:

One flat-topped temple mound at Davis Site, roughly L-shaped, constructed of clay from edge of terrace and from village area, containing numerous potsherds (no borrow pit in terrace itself). Also a conical mound on opposite side of terrace to north, and third mound which may have been flat-topped and rectangular originally but is now plowed down and more rounded in outline (neither has been excavated). Other components have one small flat-topped mound, one flat and one conical mound, etc.

LIVELIHOOD:

Agriculture indicated by numerous fragments of charred corn cobs, but no other domesticated plants noted. Economy supplemented with wild nuts, berries, seeds, fruit; by hunting (primarily deer); and shell-fish gathering.
CERAMIC TRAITS:

Pottery types: Holly Fine Engraved, Hickory Fine Engraved, Crockett Curvilinear Incised, Pennington Punctated - Incised, Davis Incised, Dunkin Incised, Kiam Incised, Weches Fingernail Impressed, Duren Neck Banded, and Bowles Creek Plain.

Temper: Coarse clay-grit, carbonized particles, pulverized bone, and a small amount of sand, or combinations thereof, depending on type.

Features: Shell temper and red filming absent from complex. Handles, lugs, applique, modeling, and effigies (with one known exception) absent from complex. Utility ware featured by jars and cylindrical to barrel-shaped vessels decorated on rim and upper body, remainder of body plain or punctated with fingernails; brushing absent. Type Bowles Creek Plain is a cross-section of nearly all vessel forms in complex only a few of which were left completely undecorated.

Long-stemmed pottery pipes with tiny bowls.

Clay earspools, mainly of “napkin ring” form, but one solid.

Clay figurines, crudely modeled human and animal forms.

Flattened, egg-shaped clay beads, perforated lengthwise. Centrally perforated clay disks.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow Points: Alba.


Knives: Copena type; leaf-shaped knives, usually poorly made; thin, poorly chipped knives of petrified wood, long, narrow, asymmetrical.
Scrapers: Side scrapers; end scrapers of two kinds: (1) thick body and long, steep bit, flat or concave in cross-section; (2) small, "snub-nosed" with steep bit at one end.

Axes or heavy blades: Triangular to leaf-shape in outline.

"Picks": Crudely chipped cores with ends pointed.

ARTIFACTS OF GROUND STONE:

Milling stones, unshaped, used with rotary grinding motion.

Stone slabs with small round pits in surface, so-called "nut-stones".

Stone bowls (2 fragments), of schist or steatite imported from elsewhere.

Stone "tablet" fragment, edges beveled by grinding.

Hones of Catahoula Sandstone, white stone imported from south.

ARTIFACTS OF POLISHED STONE:

Adze blades (flat "celts").

Petaloid celts of Ouachita Sandstone, claystone, green porphyry, and schists.

Earspools of sandstone, pulley-shaped, outer face grooved with concentric circles.

ARTIFACTS OF COPPER:

Bits of cold-hammered copper found, but no recognizable artifacts.

MISCELLANEOUS TRAITS:

Hammerstones.

Large quartz crystals, unmodified.

Pigments of hematite, limonite, gray and white kaolin, cut and scraped.

Small carved human head of kaolin bearing "Forked-Eye" symbol of Southern Cult and red ochre pressed into lines.
Apparently intentional breaking or “killing” of celts and clay figurines.

BURIAL CUSTOMS:
No data.

RELATIONS:
Arrow points of *Hayes* type and some engraved sherds as minor elements or trade objects derived from Haley Focus.

Trade (?) sherds from Sanders and Spiro Foci.

*Marksville Stamped* sherds, and *Troyville* or *Chevalier Stamped* sherds indicate trade with Lower Mississippi Valley. Sandy-paste or sand-tempered pottery indicates trade from same direction.

Celts of Ouachita Sandstone, porphyry, and schist indicate trade from the central mineral region of Arkansas or Ouachita Mts. in Arkansas or Oklahoma.

Stone bowl sherds of talc schist indicate trade from Arkansas or Appalachian Mts. region.

Stone earspools of same shape and decoration as those of Spiro and Gahagan Foci.

Quartz crystals indicate trade from central Arkansas.

*Catahoula Sandstone* indicates trade from direction of Gulf of Mexico or western Louisiana.

*Bulverde* and *Tortugas* dart points show affiliation with Edwards Plateau Aspect of central Texas although apparently made of local flints.

Evidence of derivation of some ceramic forms and decorations from Middle America (see discussion in Newell and Krieger, 1949, pp. 224-237), and of race of corn originating in same direction (Appendix by Volney H. Jones in same publication).

ESTIMATED AGE:
Some part of span 500-1000 A. D.

SOURCES:
Krieger, 1946; Webb, 1948; Harris, 1948; Newell and
Gahagan Focus (Gibson Aspect)

This focus has been established on the basis of excavations in a single site, at the flagstop of Gahagan on the west bank of Red River in De Soto Parish, Louisiana. This is about 40 miles downstream from Shreveport. The Gahagan Site and Focus are of interest to Texas archeology because they supply clues to what the burial customs of Alto Focus may have been.

Only three graves have been excavated at Gahagan, but they were extremely large and contained a wealth of offerings. Pottery was scarce compared with other artifacts, but the few vessels are all of types common in Alto Focus: Holly Fine Engraved, Hickory Fine Engraved, and Davis Incised. The last-mentioned type applies to a vessel called "Coles Creek Incised" by Webb and Dodd (1939) before the Davis Incised type was known.

Clarence B. Moore was the first to explore Gahagan, noting "many mounds" there in 1912. In the largest of these, Mound A, he discovered one large grave with five skeletons and rich offerings. Since then, rapid erosion of the Red River west bank has gradually cut back the site, destroying most of the mounds. In 1938 Webb and Dodd found only three remaining but one of them was Moore's Mound A. They excavated it more widely and deeply, finding two more very large graves with multiple burials and numerous offerings (Webb and Dodd, 1939). The site has now disappeared for all practical purposes, but by observing the bank from time to time as it was cut back, Webb has been able to trace the original village surface beneath the present floodplain surface. This village was at least one-half mile across, indicating a very large site. It has since been buried under about 18 inches of fine sediments. Except for the mounds and graves, there is an almost complete dearth of artifacts and refuse, suggesting that the ground around the mounds may once have been swept clean—a trait also noted in Adena
sites in the Middle West and in Middle American sites.

The size of Gahagan graves is of great interest, as they reflect an unusual amount of work in connection with burying the dead. Moore's grave was 13 feet 9 inches by 9 feet 8 inches and its floor 11 feet below the mound surface from which it had been dug; it contained five skeletons extended on their backs, four of them parallel with the four walls of the pit, the fifth more or less in the center on the long axis. Webb and Dodd's first grave was also rectangular, 19 feet 6 inches by 15 feet, and 8 feet deep: it contained seven skeletons, six in a row parallel to one another, and one at right angles to the others. Their second grave was 12 by 11 feet, 8 feet deep, and contained three parallel skeletons in a row. Personal adornments had been left on the bodies as worn in life, but the quantities of other offerings had been placed in piles along the pit walls and in the corners, well away from the bodies.

As Moore (1912) and Webb and Dodd (1939) give ground plans of these graves and illustrate many of the finest artifacts, these are not repeated here. A discussion of the similarities and differences between Gahagan, Alto, and other Gibson Aspect foci, and comparisons between Gahagan burial customs and those of Midwestern Hopewellian culture, will be found in Newell and Krieger (1949). To judge by the black color and fine polish of its engraved pottery, Gahagan may be cross-dated with Phase 1 of the Alto Focus at the Davis Site in Texas.

Besides the three pottery types already mentioned, other artifact types in common between Gahagan and Alto Focus at the Davis Site are: long-stemmed pottery pipes with tiny bowls near one end, Copena type knives with recurved edges, flint end scrapers, Alba type arrow points, manos, petaloid celts of greenish stones, adze blades ("flat celts"), hones of white Catahoula Sandstone, hammerstones ("pecking stones"), unworked quartz crystals, pulley-shaped stone earspools with concentric circles grooved on outer face, and the probably intentional breaking or "killing" of artifacts.
Gahagan has, on the other hand, produced a number of artifact types, most of them supposedly of ceremonial function, not so far found in Alto Focus. The rich and widespread ceremonial complex known as the "Southern Cult" is not present at Gahagan if this Cult is chiefly identified by carved and incised conch shells and gorgets, human figures embossed in thin copper plates, and monolithic axes, none of which have appeared there. Gahagan does, however, share in a number of "ceremonial" traits of an early Mississippian culture stage which are much more widespread than the specialized "Southern Cult" complex. These traits include spatulate celts, copper-covered stone and wood earspools, human and animal effigy pipes of stone and pottery, discoidal stones, shell beads, copper-covered wooden beads, etc. (see full list in Webb and Dodd, 1939).

In summary, it might be argued that the Davis and Gahagan Sites actually constitute only one focus (Alto Focus components are found in northwest Louisiana as well as Texas), Davis revealing more of the everyday material side of life, Gahagan more of the religious side with its treatment of the dead. On the other hand, no known component of Alto Focus has yet revealed anything like the great Gahagan graves or the majority of its "ceremonial" artifact types. It is to be hoped that somewhere in East Texas or northern Louisiana there is a site which will combine these complexes.

SOURCES:

Haley Focus (Gibson Aspect)

This focus occupies a relatively small area in southwest Arkansas and adjacent corners of Texas and Louisiana. Although trade vessels are known in Oklahoma, no components have been reported there. The type site is a burial mound at the Haley Place on the west bank of Red River in Miller County, Arkansas, a few miles east of the Texas
border. The mound was excavated by Moore, who described the graves in detail and illustrated some of the finest specimens (Moore, 1912). The mound was later destroyed by levee construction.

Among the many mounds and burial grounds excavated in Hempstead County, Arkansas, by Harrington (1920), at least two sites, Washington and Ozan No. 1, produced artifacts closely similar to those from Haley. Using these three sites as a nucleus, Krieger (1946, pp. 213-218) defined a Haley Focus. It was then possible to recognize several other components: at the Crenshaw mounds on Red River above Haley Place, also excavated by Moore (1912) and later by Judge Lemley, Glenn Martin, and M. P. Miroir; the lower component of Hatchel mound in Bowie County, Texas (see Texarkana Focus for notes on this site); the Handy Site, a cemetery area near Battle mound in Lafayette County, Arkansas (Moore, 1912, describes this mound and illustrates vessels which belong to its later component); a lower component of Battle mound itself, revealed by excavations in 1948 by Krieger and Lynn Howard; the lowest level (IV) of Belcher mound in Caddo Parish, Louisiana (Webb and Dodd, 1941; Webb, 1948); and East mound in Clark County, Arkansas, excavated by Dr. Robert Proctor of Arkadelphia and the Huddlestons. Newell and Krieger (1949, Figs. 63-65), illustrate East mound vessels, and describe the divergences of this site from others of Haley Focus.

In at least three of the above cases (Hatchel, Battle, and Belcher mounds), the initial occupation and mound construction was by Haley Focus people. In each case there was then a rather abrupt change in culture but the mounds continued to be increased in height and dimensions by the later occupants. This later occupation was by Texarkana Focus people at Hatchel, by Belcher Focus people at Belcher, and by a mixture of the two foci at Battle. Some of this mound increase was probably incidental to building and rebuilding houses, the outlines of which were found in the excavations; but some of it was also probably intentional.
As occupation was probably continuous from Haley Focus times into the later Fulton Aspect horizon, Haley Focus in the heart of the Caddoan Area is of unusual importance. It marks the appearance of such ceramic features as the use of handles (wide strap handles on polished bowls as well as cooking jars), applique fillets and nodes, brushing of jar surfaces as an alternative to incising, fairly extensive use of red filming, and effigy vessels, all of which are completely absent (or nearly so) in Spiro, Gahagan, and Alto. Sanders Focus is divergent from the others, but Sanders and Haley are believed to have been approximately contemporaneous from trade vessels appearing in them in both directions.

Elsewhere in the Caddoan Area, the changes from Gibson to Fulton Aspect units are on the whole quite radical, indicating not only a break in continuity but perhaps a period of depopulation. Thus the continuities from one Aspect to the other appear to have been centered about the great bend of Red River in the Haley Focus, and after a time of lapse in the surrounding areas, new influences emanated from this center, establishing the Fulton Aspect units in the four states.

A satisfactory trait list for Haley Focus is difficult to make, as the large collections of Moore and Harrington have been in storage for many years and the authors have been able to judge them only by the few published illustrations. Combining these with many other collections actually examined, the main outlines presented below should be reliable; eventually they should be amplified.

COMPONENTS:

Type Component: Haley Place, Miller County, Arkansas (Moore, 1912).

Other Excavated Components: Washington and Ozan 1 Sites, Hempstead County, Arkansas; one component of Crenshaw Site, Miller County, Arkansas; lower component of Hatchel mound, Bowie County, Texas; Handy Site cemetery and Battle mound, Lafayette
County, Arkansas; lower component of Belcher mound, Caddo Parish, Louisiana; East mound, Clark County, Arkansas.

TYPES OF SITES:

One or more mounds (temple mound, burial mound, or both) and adjacent village area, located in all known cases on floodplain of important streams, or on up-land margin immediately adjacent to floodplain. Known sites are many miles apart, suggesting that each dominated a large area.

HOUSES:

Circular in floor plan, diameters ranging from 18 feet at Ozan 1 Site to 55 feet for floor discovered under Hatchel mound. Some have central firebasin which may be surrounded by raised sill and lined with prepared clay. No definite entranceway other than spaces between wall posts. No interior posts except scattered props.

EARTHWORKS:

Variable. Haley Place had three mounds, at least one a rectangular temple mound and one a circular, flat-topped burial mound. At Hatchel Site, one small temple mound (covered over by later occupation) but no burial mound; at Battle a similar situation and burial ground found nearby. See Newell and Krieger for general description of other sites (1949, pp. 202-214). Usually a borrow pit in each site.

LIVELIHOOD:

Little direct information. Agriculture based primarily on maize inferred, probably supplemented by hunting, fishing, and shell-fish gathering.

CERAMIC TRAITS:

Pottery Types: Haley Engraved, Handy Engraved, and Haley Complicated Incised most characteristic. Also Crockett Curvilinear Incised, Dunkin Incised, East In-
cised, and Hickory Fine Engraved. Pease Brushed-Incised, Sinner Linear Punctated, Kiam Incised may occur as minor types.


Features: See type descriptions for vessel forms and decorations. Both jars and bowls often have rims raised into four peaks, and wide strap handles occur both on jars and bowls. Applique common on type Haley Complicated Incised, which also has brushing substituted for or added to incising. Red film occurs on type East Incised. Highly conventionalized effigy bowls and other effigy vessels.

Long-stemmed pottery pipes, but stems thicker and bowls larger than on pipes of Alto, Gahagan, and Spiro Foci (see Harrington, 1920, Plate 102, B, C from Washington Site as contrasted with A, D, E from Spiro Focus Mineral Springs Site).

Elbow pipes in some components (Harrington, 1920, Plates 103, 104, specimens from Ozan 1 and Washington Sites).

Modeled effigy pipes (Harrington, 1920, Plate 105).

ARTIFACTS OF CHIPPED STONE:
  Projectile Points:
    Arrow Points: Hayes Barbed.
    Dart Points: No data.
  Small drills.

ARTIFACTS OF GROUND STONE:
  Abrading stones (hones) of sandstone.
  Small milling stones and manos.

ARTIFACTS OF POLISHED STONE:
  Adzes with flat sides and sharp, polished bits; shaped by chipping, then ground and polished at bit end. (Includes "chisels" of Moore?).
Spatulate celts.
Petaloid celts.
Earspools, pulley-shaped (uncommon).
Human-effigy pipe of limestone (Moore, 1912, Figs. 34-36).
Bannerstones (uncommon).

ARTIFACTS OF BONE AND ANTLER:

Long, thin pins of polished bone, some with eye in one end.
Antler tines (flaking tools?).
Turtle-shell rattles containing pebbles.

ARTIFACTS OF SHELL:

Pendants of various shapes.
Barrel-shaped beads made from conch-shell columnellae.
Disk-shaped and tubular beads cut from conch-shell columnellae.
Pins with rounded heads (ear ornaments?) cut from conch-shell columnellae.
Oblong and triangular pieces of conch shell, unperforated and sometimes having asphaltum on one side, suggesting use as inlays in wooden objects.
Conch-shell dippers or "cups", undecorated, made by removing columnellae.
Earspools, with thin copper cover on one side.
Imitation carnivore tooth, copper-covered.
Beads of perforated *Olivella* shells from sea (Gulf of Mexico?).
Ornaments of perforated fresh-water *Unio* shells.

ARTIFACTS OF COPPER:

Thin sheeting used to cover parts of earspools, disk-shaped beads, imitation carnivore tooth, etc. No artifacts entirely of copper reported.

MISCELLANEOUS TRAITS:

Pigments of limonite, hematite, clays.
Pearl beads, from fresh-water mussels.
Quartz crystals, unworked (amulets?).
Masses of galena, sometimes in graves.
Hammerstones.
Smearing of artifacts with green pigment.

BURIAL CUSTOMS:
Most interments contain single skeleton, extended on back, in large rectangular grave with burial offerings piled against walls. Personal adornments left on body as worn in life. Occasionally two or three skeletons in one grave.

RELATIONS:
Hickory, Crockett, and Dunkin pottery types shared with Alto Focus.
Hayes arrow points and possible Haley trade sherds found at Davis Site.
Trade vessels of Maxey Noded Redware of Sanders Focus found at Haley Place (Moore, 1912, Figs. 40, 41, 44, Plate XL).
Trade vessel of Haley Engraved found at Sanders Site (Krieger, 1946, Fig. 15).
Circular house floors ranging from 18 to 55 feet in diameter, entrance through spaces between posts, very similar to those of Alto Focus at Davis Site, very different from those of Spiro Focus.
Burial in large, deep rectangular graves with personal adornments left on body, and offerings of pottery, pipes, celts, arrows, etc., piled along walls, very similar to those of Gahagan Site (see Gahagan Focus) except that Haley graves usually contain only one skeleton and are therefore not as large.

ESTIMATED AGE:
Some part of span 800-1200 A.D.

SOURCES:
Sanders Focus (Gibson Aspect)

Sanders is the most divergent of all Caddoan foci. Its pottery is characterized by simple straight-line designs and a much higher proportion of entirely plain pottery than in any other complex in the region. The usual Caddoan decorative techniques of engraving, incising, and punctating are well represented; there is considerable red-filming; and the variety of vessel forms is comparable to that of other foci. Participation in the Southern Cult ceremonialism is expressed in carved and incised conch-shell gorgets and dippers, although hammered copper plates and most other Cult traits are absent, so far as known.

The focus is based on data recovered from the T. M. Sanders Site in the northwest corner of Lamar County near the right bank of Bois D'Arc Creek, about one-half mile south of the Red River. Other components for the most part lie to the north, in southern Oklahoma, and to the south, as far as the Yarbrough and Joslin Sites in the vicinity of Grand Saline on the Sulphur River in Van Zandt County. No components are known very far east or west of this belt, which is essentially a prairie rather than forest. The culture of Sanders Focus clearly reflects this frontier position between eastern forests and the Great Plains. Bison bones are plentiful in the middens, and artifacts such as hoe blades were fashioned from bison bones; the four-edged beveled knives and stone elbow pipes are other Plains traits, not found in Caddoan foci except those in Oklahoma in a similar frontier position.

The Sanders Site has been described and its artifacts and graves analyzed (Krieger, 1946, pp. 171-203 and Plates 16-29; Newell and Krieger, 1949, p. 218). Due to conditions described in the first publication, only the artifact types present in graves containing typical Sanders pottery have been definitely included in the focus. The site was occupied by different cultural groups after the close of Sanders Focus itself, probably by various Caddoans passing this way on bison hunts.
A correction should be made in the publications cited, which state that the Sanders "mounds" probably were natural knolls on which the Indians had lived and buried their dead, and that the site is farther west than those on which true mounds are found. Visiting the site in 1952, Krieger and Jelks were convinced that Mound 1 was a true burial mound, and Mound 2 originally a rectangular temple mound with a flat, rectangular top. Both are now considerably reduced and rounded by many years of plowing. Furthermore, they visited another artificial mound on the Morgan Place about 10 miles farther west in Fannin County; this lies on a second terrace a short distance south of Red River, is larger in lateral dimensions than Sanders Mound 2, and has a large flat, rectangular top. While only 6 or 7 feet high, the Morgan mound is doubtlessly artificial also. No cultural material has yet been found in or on it, but R. K. Harris informs us he has collected Sanders Focus sherds in the fields nearby.

The trait list below is based primarily on the graves excavated in Sanders Mound 1. Other components are recognized through typical pottery.

COMPONENTS:

Type Component: T. M. Sanders Site, Lamar County, excavated by University of Texas in 1931, under direction of A. T. Jackson and B. B. Gardner.

Other Components: Part of remains excavated in 1940 by University of Texas and WPA on Fred Yarbrough and T. M. Joslin farms near Grand Saline, Van Zandt County; surface collections on small sites in Lamar, Fannin, Wood, and Hopkins Counties. Morgan mound in northeast corner of Fannin County probably belongs. Nelson Focus in Choctaw County, Oklahoma, across Red River, contains sites with Sanders Focus material (Bell and Baerreis, 1951).

TYPES OF SITES:

Some sites (Sanders, Morgan, Yarbrough) are large, with one or more mounds, situated on terraces adjacent to large streams; others probably quite small,
without mounds, and on small tributary streams.

HOUSES:

One house at Sanders Site is reported to have been rectangular, about 10 by 12 feet, with wall posts set vertically on three sides, fourth side left open. Burned clay with stick and reed impressions indicate walls constructed of wattle covered with clay; roof construction unknown. No information on fireplace or entranceway; association of this house with focus uncertain.

EARTHWORKS:

In 1931, after they had been plowed down for many years, the Sanders site mounds were measured by A. T. Jackson, as follows: Mound 1, which contained the 21 burials he excavated, plus scores more plowed up and dug by looters, was 175 feet long northeast by southwest, 70 feet wide, and 4 feet high; Mound 2, a temple mound at one end of which the house described above was found, was 230 feet long north-south, 90 feet wide, and about 8 feet high with more or less rectangular flat top. Both mounds were on the edge of an upper terrace and the sides facing Bois D'Arc Creek drop sharply downward to a lower terrace; they have probably been partly dissected by erosion. Morgan mound estimated to have been rectangular originally, about 220 feet long north-south and 150 feet wide; flat top about 110 feet long north-south and 90 feet wide, rising 6 or 7 feet above terrace level. Yarbrough site contains a single small eminence, either a natural knoll or a small artificial structure, containing camp refuse but few burials.

CERAMIC TRAITS:

Pottery Types: Sanders Plain, Sanders Engraved, Canton Incised, Maxey Noded Redware, and Monkstown Fingernail Punctated.

Temper: Coarse clay-grit, sometimes including pulver-
ized bone or potsherds, and small amount of sand. Shell temper absent.

Features: Red film occurs frequently in Sanders Plain, Sanders Engraved, and Maxey types. Small lugs or strap handles appear on jars of Monkstown type; applique on Maxey type. Where decoration covers upper parts of vessels, lower parts are completely plain, never brushed or fingernail punctated. This absence of brushing is important distinction from Fulton Aspect pottery.

Long-stemmed pipes with small bowls, but somewhat larger and thicker than those in other Gibson Aspect foci except Haley (see Haley Focus).

Disks with central hole, usually made from disk bases of broken pottery vessels, sometimes from side walls; usually believed to have been spindle whorls.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:
  Arrow Points: Bonham type.
  Dart Points: Present at Sanders and other components, but association of specific types with focus uncertain.

Knives: Diamond-shaped, four-edged, with steep bevels on all edges, resembling common Plains type but very narrow in proportion to length. Most have edges polished as though from continued use.

Unshaped flint-spall scrapers with edge retouch.
Small snub-nosed flint scrapers.
Thick single-bitted and double-bitted axes, two wide notches for hafting (association uncertain).

ARTIFACTS OF GROUND STONE:

Milling stones, small with round or oval basin, may have small round pits in sill around basin.
Manos, any suitable pebbles, used with rotary motion, may have pits in face.
Hones of sandstone.
ARTIFACTS OF POLISHED STONE:

Petaloid celts of hematite and pale green Ouachita Sandstone.
Adzes with flat faces and sharp bits.
Elbow pipes of Ouachita Sandstone.
Spatulate celt of steatite, long, thin, narrow (association uncertain).

ARTIFACTS OF SHELL:

Conch-shell dippers made by removing columnellae, both plain and incised.
Conch-shell gorgets, decorated by incising and cutting out sections (for designs see Krieger, 1946, Figs. 11-13).
Conch-shell gorgets, plain disks with suspension holes and scalloped edges.
Tubular and barrel-shaped beads of conch-shell columnellae.
Disk beads of conch shell.
Small whole conch shells with suspension hole at small end, used as pendants.
Various small, geometric forms cut from conch-shell walls, probably inlays for wooden objects.
Pearl beads, from fresh-water mussels.
Olivella beads with spires removed (West Indian and Gulf of Mexico species).
Large perforated mussel shells, so-called “hoe blades” (association uncertain).

ARTIFACTS OF BONE:

Hoe blades of bison scapulae with socket in proximal end.
Splinter awls of deer leg bone.
Fishhooks (?).
Shaft straighteners (?) of deer vertebrae with channels smoothed.
“Sinew stretchers” made from deer jaw with diastrema polished.
Turkey-leg bones with small holes punched in broad end (game pieces?).
Deer calvaria with antler stubs, possibly strapped to head as hunting disguise or ceremonial headdress (association uncertain).

ARTIFACTS OF COPPER:
Thin sheeting used for earspool covering.
Contact with copper indicated by green stains on scapula hoe blades and conch-shell artifacts.

MISCELLANEOUS TRAITS:
Red ochre and green clay pigments.
Beads of small perforated Lithospernum seeds.
Pronounced frontal and occipital head deformation, both sexes, on all but one of 60 skulls from Sanders Site.

BURIAL CUSTOMS:
Both single and multiple interments. As many as eight individuals in one grave, but closely packed together as graves not enlarged proportionately. Skeletons extended on back or side with heads usually to east; grave pits rectangular. Pottery placed about head and shoulders of individuals, sometimes along sides and between legs. Personal adornments left where worn in life. In at least one grave, offering of vessels was away from skeleton, against grave wall, the method described for Gahagan Focus in Louisiana.

RELATIONS:
Southern Cult traits connect with Spiro Focus.
Bonham points closely similar to Alba points of Alto, Gahagan, and Spiro Foci; also to Hayes points of Haley Focus.

Bottle of Haley Engraved type at Sanders as trade ware; bottles of Maxey Noded Redware at Haley Place as trade ware.

Sanders sherds as trade ware in Phase 2 of Alto Focus (Spiro trade sherds in same position there).
A negative-painted bottle indicates trade or influence from eastern Oklahoma or southern Missouri.
Hones of white Catahoula Sandstone obtained from
southeastern Texas or southwestern Louisiana. Ouachita Sandstone (celt material) obtained from southeastern Oklahoma or southwestern Arkansas.

Sanders pottery types recognized as trade ware in sites of Wiley Focus in north-central Texas and Central Texas Aspect in central Texas.

ESTIMATED AGE:

Some part of span 800-1200 A. D. Sanders and Haley Foci believed to be the latest in Gibson Aspect, but partly overlapping Spiro, Gahagan, and Alto.

SOURCES:


Spiro Focus (Gibson Aspect)

The famous site near Spiro, on the south bank of Arkansas River at the eastern edge of Oklahoma, has been the principal basis for defining a Spiro Focus. The University of Oklahoma and WPA conducted extensive excavations in the Craig, Brown, and other mounds at this site in 1938-1941 (Orr, 1939), as well as in other components of this focus. A Spiro Focus was later defined (Krieger, 1944 b, 1946; Orr, 1946, 1952; Bell and Baerreis, 1951), but there has been considerable controversy over the number of foci present at the Spiro Site itself. The Fort Coffee Focus (Orr, 1946, 1952) was created to embrace remains in the same vicinity which are clearly of later date than the great ceremonial complex seen in the Craig and Brown mounds. Orr (1946) defined Early, Middle, and Late Spiro components for this ceremonial material, but failed to make clear whether all were included in the same focus. Krieger (1953) has criticized this division, claiming that only Orr's Middle Spiro component should be considered equivalent to a Spiro Focus, the Early component belonging to a preceding occupation, and the Late component more akin to Haley Focus.
The fabulously rich Craig mound at this site was senselessly dynamited by commercial "relic hunters" before the WPA excavations were conducted, thus spoiling forever much valuable evidence. Through the interest and hard work of a few individuals, a great deal of the looted material subsequently reached the safety of museums. An attractive book is now available, illustrating the wealth and diversity of these artifacts (Hamilton, 1952).

Recent researches by Bell in eastern Oklahoma have shown that the definition of Spiro Focus is very complicated. Since a strict definition has yet to be made, a trait list is not feasible at present. However, it may be said that the richest material, particularly that belonging to the "Southern Cult", provides the central core for a Spiro Focus which is not only distinct from others in the Caddoan Area, but an integral part of the Gibson Aspect (Newell and Krieger, 1949, pp. 199-202). Bell and Baerreis (1951) present a concise summary.

The Sanders Focus in northeast Texas provides a close relative of Spiro, partly in ceramics and partly in ceremonial elements such as carved and incised conch shells and gorgets. Sanders is believed to date somewhat later than the climax of Spiro Focus, as the shell work is sparse and poorly done by comparison, some typical Sanders Plain and Sanders Engraved vessels appear to belong to Orr's Late component, and not a sign of typical Spiro pottery has been found at the Sanders Site. On the other hand, two sites with typical Spiro Focus pottery (Spiro Engraved and Hickory Fine Engraved) are known in Texas, but do not have Sanders pottery, so far as known. These are the Jaggers Site in Franklin County, and Mustang Creek burial mound in southern Red River County.

Among the traits shared by Spiro and Sanders Foci are: erection of mounds, probably both temple and burial mounds, extended burials with copious offerings, rectangular house floors, conch-shell gorgets and whole conch shells made into cups or dippers by removing the columnellae, spatulate
celts, copper coating on pulley-shaped stone earspools, and stone pipes.

We illustrate only one Spiro Focus pottery type herein, *Spiro Engraved* (Plate 64). Although similar to *Holly Fine Engraved* of Alto Focus (Plates 34, 35), the lines are generally heavier and farther apart, small areas in the designs are sometimes finely punctated (absent in *Holly*), the design units are almost always repeated four times (true of bottles in *Holly* type, but not bowls), and these designs often consist of a tight spiral filling each of the four panels (rare in *Holly*). While these differences are clear enough at the Spiro and Davis Sites, about the great bend of Red River in southwest Arkansas (notably at the Crenshaw mounds) they tend to fuse so that classification is sometimes difficult.

Pottery types *Crockett Curvilinear Incised* and *Hickory Fine Engraved* are held in common by Spiro and Alto Focus (as well as Haley), as are arrow points of type *Alba*, *Copena* knives with recurved edges, delicate long-stemmed pottery pipes, and pulley-shaped stone earspools with grooved designs on the outer face. Thus, when such traits are found in northeast Texas, it is hard to assign them to Spiro or Alto Focus unless appropriate pottery types accompany them. They would, at any rate, indicate the presence of a Gibson Aspect unit of some kind rather than Fulton Aspect.

**SOURCES:**


*Frankston Focus (Fulton Aspect)*

Components of this focus are centered in the upper drainage system of Neches River, in eastern Anderson and Henderson Counties; in Cherokee County except for the southern end; in southern Smith County; and southeastern Van Zandt County. The town of Frankston marks the approximate center of this “home area”. Other components are found more widely, but not in such concentration. One
component is known at the Lane Mitchell Place 12 miles southwest of Marshall in Harrison County, about 60 miles northeast of the main area.

Frankston Focus is a late prehistoric complex, directly ancestral to the historic Caddoan-speaking Tejas tribes, while the historic Allen Focus represents the Tejas tribes themselves (also called Hasinai by the Spanish and Cenis by the French). Several common types of Frankston Focus pottery are found as trade ware in Wylie Focus in the Dallas area (see North-Central Texas) and in components of the Central Texas Aspect (see Central Texas) in the Brazos and Colorado River drainages, occasionally even farther west. The only projectile-point type positively associated with this focus is the small, thin Perdiz type of arrow point with barbs and a long, pointed stem. The Perdiz type occurs very widely over Texas west and south of the Neches River valley, but only rarely to the east. Because of its position on the southwestern periphery of the Caddoan Area during Fulton Aspect times, Frankston Focus plainly reveals more contact with the non-Caddoan people to the west than any other Caddoan foci.

While Frankston Focus lies in approximately the same area as Alto Focus components in the upper Neches valley, its pottery and other artifacts are very distinct from the latter, with almost no continuities. This indicates that there was probably a period of depopulation in this area after Alto Focus ended. Not only are the Frankston Focus vessels different in shape and design, but the common use of dark gray and black pottery in Alto Focus was replaced by pottery of yellow, tan, buff, and light brown colors in Frankston Focus. Whereas Alto Focus contains no brushed vessel surfaces, applique, effigies, or handles, all these traits are common in Frankston Focus. Although it was contemporaneous with Texarkana, Belcher, and McCurtain Focus, which made use of shell temper and red film, neither of these traits ever appears in Frankston Focus, so far as known. The diffusion of shell temper and red film simply never reached this
far westward in East Texas; they are not present in the preceding Alto Focus, nor in the succeeding Allen Focus on the historic level.

The A. C. Saunders Site in Anderson County, a pure Frankston component, was excavated in 1931 and 1935 (Jackson, 1936). It produced not only a very large, circular house floor and a great ashy midden, but several thousand potsherds. In Cherokee County near Jacksonville, the Omer and Otis Hood Site was excavated in 1936 by the University of Texas, producing nearly 200 vessels from graves. During the same year, several other components were excavated to a less extent, with many graves and pottery vessels as well as pipes and stone artifacts. The following trait list is based principally on the Saunders and Hood Sites, with supplementary material from the others and from surface collections.

COMPONENTS:

Type Components: A. C. Saunders Site, Anderson County, and Omer and Otis Hood Site, Cherokee County.

Other Components: J. M. Cook, R. E. Daly, Rose Daniels, Isabel Donnell, E. W. Ellis, Pace McDonald, F. Murphy, Quate Place, J. D. Reagan, Royal Place, J. C. Slaughter, and Mrs. Joe Watkins Sites in Anderson County; De Rossett, L. B. Miller, and T. W. Thrasher Sites in Henderson County; Mrs. J. W. Blackburn, G. Ellis, P. Johnson, and J. M. Snow Sites in Cherokee County; Yarbrough Site (part) in Van Zandt County; numerous surface collections made in eastern Van Zandt and Smith Counties by Jack T. Hughes; and Lane Mitchell Site in Harrison County.

TYPES OF SITES:

Small communities near virtually every stream in area as well as on sandy uplands; probably each had a cemetery area in or next to the village.
HOUSES:
Only one excavated, at Saunders Site, was circular and approximately 46 feet across; any of several gaps between wall posts could have been entranceways. Interior features included support posts in irregular positions and a firebasin (Jackson, 1936).

LIVELIHOOD:
Agriculture inferred (probably maize, beans, and squashes), as recorded for historic Tejas in late 17th century, supplemented by hunting, gathering of wild foods, and both fish and shellfish.

EARTHWORKS:
Mounds unknown except in one or two cases where Frankston people used a small mound erected by Alto Focus people (e. g., Pace McDonald Site).

CERAMIC TRAITS:
Pottery Types: Poynor Engraved, Bullard Brushed, Maydelle Incised, LaRue Neck Banded, and Killough Pinched all common; also effigy bowls with bird and animal heads and tails on opposite sides of rim; rattle bowls with four hollow knobs containing pebbles.

Temper: Usually very coarse clay-grit, occasionally mixed with pulverized bone or potsherds; rarely, crushed limestone.

Features: Shell temper and red filming absent; brushed surfaces common, on jars and on underside of bowls with polished and engraved rims. Some small jars and rattle bowls have four legs resting on a ring base. Engraved designs simple and consist mainly of arcs set back-to-back to form ovals around rim; also "ladders" and simple triangles. Some ticking occurs but rare compared with Allen Focus.

Flat disks (spindle whorls?) made by boring hole in center of thick base of discarded jar, occasionally in a body sherd.
Pipes of elbow form, stem and bowl meeting at acute angle; bowls are conical, widely flaring; both bowl and stem may be decorated by engraving, punctating, and may have red or white pigment in design as in pottery type Poynor Engraved.

Beads of baked clay, large, tubular.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow Points: Perdiz type, found commonly in graves as well as midden.

Dart Points: Many types of Archaic Stage found on these pottery sites but not in graves so association doubtful. Those found most often are Gary, Yarborough, Palmillas, Elam, Ellis.

Scrapers: Small snub-nosed end scrapers rare; unshaped spalls common.

Drills: Small, bases unshaped or T-shaped; rare.

Knives: Large, usually triangular with edges straight to convex.

ARTIFACTS OF GROUND STONE:

Small milling stones of ferruginous sandstone, some with pits in sill.

Manos of unshaped stream pebbles.

Hones of ferruginous sandstone.

ARTIFACTS OF POLISHED STONE:

Celts; small, thick, petaloid form, of fine-grained sandstones.

ARTIFACTS OF SHELL:

Mussel-shell "spoons" (whole shells beveled toward smaller end).

Perforated mussel shells (pendants?).

Small pendants of conch shell.

Cylindrical beads made from conch-shell columnellae.

ARTIFACTS OF BONE AND ANTLER:

Flaking tools of deer ulnae.
Flaking tools of antler tines, tips blunt and round.  
Awls of unshaped animal-bone splinters.  
Beads made of sections of bird-leg bones.  
Sections of antler with socket in one end (knife or drill handles?)

BURIAL CUSTOMS:
Interments single, extended on back, with most ceramic offerings placed around head and shoulders, occasionally along legs or at feet. Offerings of pipes, arrow points, beads, etc., in various positions.

RELATIONS:
Utility pottery types Bullard Brushed, Maydelle Incised, and LaRue Neck Banded shared with Titus Focus. Sherds of Ripley Engraved occur rarely as trade ware in Frankston Focus. No trade relationships known so far with other Caddoan foci.

Frankston Focus sherds are found widely to the west, in Wiley Focus and Central Texas Aspect, as trade ware. Sherds have been noted as far west as Abilene and San Antonio.

Arrow-point type Perdiz shared with late prehistoric units of Coastal, Southwest, Central, and North-Central Texas.

ESTIMATED AGE:
1200-1600 A.D. or greater part thereof.

SOURCES:

Titus Focus (Fulton Aspect)

Components of this focus are found entirely within northeast Texas, principally in the valleys of the upper Sulphur and Sabine Rivers and the numerous small valleys between them, such as the Big and Little Cypress Creeks. The heart of the area lies in Titus, Franklin, Morris, Camp, and Upshur Counties, with a great many sites represented
by surface collections, looted graves, and a dozen or so small excavations. Other counties in which numerous sites are known are: Hopkins and Wood on the west, southern Lamar and Red River on the north, western Bowie and Cass, Marion, Harrison, Gregg, and northern Smith on the south.

While the pottery of Titus Focus is poorly made when compared with that of Texarkana, McCurtain, Mid-Ouachita, and Belcher Focus (not to mention that of the whole Gibson Aspect), it presents a very large array of vessel forms and decorative patterns in such endless combinations that it is probably the most difficult of all to classify. The University of Texas collections alone contain over 2,000 vessels belonging to this focus. The richest known site is that on the H. R. Taylor farm in Harrison County, where more than 550 vessels were found with 64 burials, one of which contained 35 vessels and other artifacts. The Russell Site in Titus County, Cash Site in Camp County, and Riley Site in Upshur County, were nearly as rich although fewer graves were found.

Titus Focus ceramics are featured by much lighter colors than those of other Fulton Aspect foci except those farther west, Frankston and Allen. The paste is usually light gray, buff, tan, and cream and the cores slate gray. Red film is not uncommon and when designs were cut through it, the light colored paste underneath provided good contrast with the red—much more so than in the dark ware of other foci. The engraved designs were executed with bold, forceful lines usually of careless draftsmanship, although some may be classed as excellent. The material culture of Titus Focus appears to have been centered on producing large amounts of pottery; it is otherwise poor, featured mainly by clay pipes and numerous finely made triangular arrow points of the Talco type. There was no mound building and as yet there is no data on house patterns.

Contact with the Puebloan culture during a Pueblo IV period has been suggested in the appearance of ollas in Titus and Belcher Foci, the sharing of carinated and sharpl-
shouldered bowls in Titus, Texarkana, and McCurtain foci as well as in the Southwest at this time, and the neck banding of utility jars in Titus, Frankston, Texarkana, and McCurtain Foci (Krieger, 1946, pp. 221-247 and Plates 30-35). Titus Focus appears to have been involved in all these comparisons, more than the other foci, and it is the only one in which actual trade sherds have been recognized from the Puebloan culture. Sherds of Nocona Plain suggest trade contact with either Wylie or Henrietta Focus in north-central Texas; and although Titus Focus sherds are found as trade ware in the adjacent Caddoan foci on all sides, they are not as numerous as one would expect.

The trait list below is compiled from the components listed; at least 100 others are known but have not produced any additional traits.

COMPONENTS:

Type Component: None designated.

Principal Excavated Components: Taylor Site, Harrison County; Cash Site, Camp County; Riley Site, Upshur County; Cason, Justiss, Watson Sites, Morris County; Atkinson, Galt, Gandy Sites, Franklin County; Reese Site, Wood County; Culpepper Site, Hopkins County; Russell, Ford, Farrar, Caldwell, Williams Sites, Titus County; and later component at Hale and Keith Sites, Titus County. Titus County excavations briefly described in Goldschmitt (1935).

TYPES OF SITES:

Hardly any data, as collecting and excavation have been done almost entirely in burial areas. Villages probably not extensive in any case, at most a few hundred feet across, and located near both large and small streams as well as in sandy uplands.

HOUSES:

No data. One large circular floor partly excavated at Keith Site, Titus County (Goldschmitt, 1935) probably belongs to an earlier component related to Alto Focus.
EARTHWORKS:

No mounds constructed. A few mounds in area constructed by earlier people were lived on and increased slightly in height, as shown by typical Titus Focus sherds in their uppermost parts.

LIVELIHOOD:

Agriculture inferred, supplemented by hunting, fishing, food gathering.

CERAMIC TRAITS:

Pottery Types: Most characteristic are Ripley Engraved, Taylor Engraved, Bailey Engraved, Wilder Engraved, and Harleton Appliqued. Glassell Engraved, Belcher Rridged, and Belcher Engraved of Belcher Focus occur in easternmost components, particularly at Taylor Site, Harrison County. Karnack Brushed-Incised apparently a special development in these eastern components. Former type Leesburg Neck Banded now incorporated in LaRue Neck Banded and shared with Frankston Focus. Former type Winfield Brushed now incorporated in Bullard Brushed and shared with Frankston Focus. Types Killough Pinched and Maidelle Incised of Frankston Focus occur occasionally.

Temper: Clay-grit, usually coarse, with pulverized bone or kaolin occasionally added, in polished and utility vessels alike. Shell temper absent in resident pottery but occurs in some trade vessels from Texarkana or McCurtain Foci.

Features: Red film occurs on only two types: rather commonly on Ripley Engraved, rarely on Taylor Engraved. An outstanding feature of all Titus pottery is the strong insistence on repeating design units four times, whether engraved, appliqued, or incised; there are few exceptions. Utility vessels have every combination of incising, brushing, fingernail and stick
punctating, and applique fillets and nodes, on bodies, rims, or both in different combinations. Strap handles and lugs, two or four in number, occur rarely on jar rims. Quadrature of jars in four raised peaks on rims; of bottles in four body lobes. Miniature vessels especially common, usually placed with child burials. Effigy bowls with head and tail of birds and animals on opposite sides of bowls, rattle bowls with four hollow knobs containing pebbles, and small simple bowls covered with applique nodes also fairly common.

Elbow pipes, bowl and stem ends of about equal size; sometimes engraved.

Perforated disks made of potsherds (spindle whorls?). Nose or lip plugs.

Squeezed lumps of clay, baked like pottery, and smoothed or polished.

**ARTIFACTS OF CHIPPED STONE:**

**Projectile Points:**

*Arrow Points:* Types Talco and Bassett found commonly in graves, Maud rarely. Dart Points: Gary and Ellis frequently collected on these sites but never in graves; association not proved.

**ARTIFACTS OF GROUND STONE:**

Small milling stones, unshaped slabs of ferruginous sandstone. Manos, of ferruginous sandstone, unshaped or roughly rectangular. Pitted stones ("nut stones"); also pits in faces of manos and sills of milling stones. Hones, of ferruginous sandstone. **ARTIFACTS OF POLISHED STONE:**

Petaloid celts common, usually shaped entirely by pecking, then bit end ground to high polish; made of pale green Ouachita Sandstone.
Petaloid celts, ground and polished all over, less common.

Flat, rectangular adzes, ground and polished all over, made of flint and other hard stones, uncommon.

Adzes, apparently made of selected flat stream pebbles, unshaped except for highly polished bit; body may or may not be polished.

**ARTIFACTS OF SHELL:**

- Cylindrical beads of conch-shell columnellae, rare.
- Effigy pendants (insects?) of conch or thick mussel shell.
- Thin mussel shells with hole in edge (used as beads?).

**ARTIFACTS OF BONE:**

- Awls of split deer-leg bone.
- Antler tines, possibly flaking tools.
- Deer-ulna flaking tools.

**BURIAL CUSTOMS:**

So far as known, the hundreds of burials excavated contained a single individual, extended on back, with pottery vessels around head and shoulders, occasionally at feet or sides or between legs. Graves small, all offerings close to body; child burials often accompanied by miniature vessels 5 to 10 cm. high. In this area, peculiar soil conditions appear to be responsible for complete disappearance of bones (except teeth or tooth enamel) in some sites, so that only evidence of grave is position of pottery, soft earth fill, and impressions of bones in ground.

**RELATIONS:**

Pottery types shared with Belcher and Frankston Foci as mentioned above.

Pottery types Hodges Engraved, Simms Engraved, Avery Engraved, Keno Trailed, and Nash Neck Banded appear occasionally, probably as trade ware from foci to north and northeast.
One sherd of *Coles Creek Incised* appears in A. P. Williams Site, Titus County, which is pure Titus Focus component without other foreign elements.

Trade sherds of *Chupadero Black-on-White* and upper Gila brown ware found on other Titus Focus sites (Krieger, 1946, pp. 207-208).

Sharing of certain vessel forms and neck banding with Puebloan culture in Pueblo IV period (Krieger, 1946, pp. 221-247 and Plates 30-35). Some of these may be due to suggestion from trade ware, others to actual movement of people in both directions.

Trade sherds of type *Nocona Plain* from Henrietta or Wylie Focus of north central Texas.

**ESTIMATED AGE:**

1200-1500 A. D., possibly lasting until 1600 A. D.

**SOURCES:**

Krieger, 1946, pp. 205-247 passim, Figure 18, and Plates 30-35.

*Bossier Focus (Fulton Aspect)*

Components of this focus occur principally in northwestern Louisiana, where it was recognized by Clarence H. Webb on the basis of his site surveys and excavations (Webb, 1948). A few components have been recognized in northeast Texas (Krieger, 1946; Stephenson, 1950). Typical vessels have also appeared in private collections made in southwest Arkansas, where they may be of trade origin.

The Bossier Focus has been particularly difficult to define, since all its known sites also contain material belonging to other foci. By careful cross-checking of traits, however, Webb has succeeded in drawing up a tentative outline on which the trait list below is based. We agree that such a complex exists, and that it was partly derived from both the Haley and Alto Foci of Gibson Aspect; as such, it appears to be an introductory phase of the Fulton Aspect, leading to the Belcher, Titus, and perhaps other foci.
COMPONENTS:

Type Component: None designated.
Other Components: Harrison Bayou Site, Harrison County (Webb, 1948); several in McGee Bend Reservoir basin in Jasper, Sabine, San Augustine, Angelina, and Nacogdoches Counties (River Basin Surveys report by R. L. Stephenson, 1950); fifteen sites in Caddo, Red River, DeSoto, and Natchitoches Parishes, Louisiana (Webb, 1948).

TYPES OF SITES:

Small, compact communities located on upland slopes near minor streams, lakes, and springs, or on slopes fronting toward large alluvial valleys; rarely on floors of largest valleys themselves.

HOUSES:

Apparently roughly oval structures with projecting entranceway. Interior features vary, may include multiple fire places not in prepared basin, cist-like cache pits, scattered interior posts or props.

EARTHWORKS:

Mounds rare; occasionally a small sand mound in hilltop site overlooking valley. At Belcher Site, Caddo Parish, a Bossier complex appears to mark one stage of mound construction (above a Haley Focus stage and beneath two stages with Belcher Focus); Belcher Site is on west side of Red River on a broad alluvial plain.

LIVELIHOOD:

Agriculture, supplemented by hunting, fishing, gathering of wild foods.

CERAMIC TRAITS:

Pottery Types: Pease Brushed-Incised and Sinner Linear Punctated are best diagnostic types. Maddox Engraved (Maddox Band Engraved), Maddox Brushed,
and Belcher Ridged also diagnostic; types Dunkin Incised and Kiam Incised from late phase of Alto Focus. Some Haley Focus types possibly occur as survivals, especially in north of area. Taylor Engraved reported as present (Webb, 1948) but this type now revised.

Temper: Principally clay-grit; occasionally pulverized bone and tufa. Shell temper absent or extremely rare.

Features: Red filming unknown. Some quadration of vessels and designs. Lugs and handles occasionally present. Effigies absent or extremely rare. Incising, punctating, brushing, and applique all present, but work generally inferior to that of other Caddoan units. Engraved designs consist mainly of “ladders” placed vertically or diagonally on body or rim, less often of cross-hatched bands in curvilinear patterns.

Elbow pipes, plain or engraved.

Pipes in form of rectangular block with incised decoration.

Perforated disks made from potsherds (spindle whorls?).

Beads made from potsherds.

Pottery trowels (?)

Fragments of human figurines.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow Points: Alba type; others of uncertain association.

Dart Points: Gary, Ellis, San Patrice; possibly others.

Scrapers: Small, oval or triangular in shape.

Drills: Small flakes with expanded but unworked bases; others with bases shaped more or less into rectangle (association uncertain).

Spokeshaves: Albany type (see Webb, 1946, for description; association uncertain).

ARTIFACTS OF GROUND STONE:

Small, rough sandstone milling stones.

Oval manos.
Pitted stones ("nut stones").
Hones of brown sandstone.

ARTIFACTS OF POLISHED STONE:
Rectangular adzes or celts with squared bases and mildly recurved edges.
Small, triangular "celts", less frequent.
Full-grooved axes (association uncertain).
Two-hole gorgets (association uncertain).
Beads of tubular and pendant shape (association uncertain).

ARTIFACTS OF SHELL AND COPPER:
No data.

ARTIFACTS OF BONE:
Beads made from sections of bird-leg bone (association uncertain).

MISCELLANEOUS TRAITS:
Hammerstones.
Unworked quartz crystals.
Pendant of quartz crystal (association uncertain).

BURIAL CUSTOMS:
Single interments, skeleton extended on back in shallow grave in village area. Burial offerings sparse, usually consisting of pottery vessels behind or near head, and (rarely) pipes.

RELATIONS:
Presence of Dunkin Incised and Kiam Incised may mean contemporaneity with phase 3 of Alto Focus, but probably these types lasted after most of Alto Focus traits had disappeared. Pease Brushed-Incised probably occurs in Haley Focus and presence in Bossier probably means survival. Presence of Belcher Ridged anticipates Belcher Focus complex. On the whole, Bossier Focus appears to bridge time between disappearance of Gibson Aspect and beginning of Fulton Aspect, but
this needs to be determined more accurately with excavations. At Belcher Site, Level IV appears to be Haley Focus, Level III, Bossier Focus, Levels II and I, Belcher Focus (Levels but not foci discussed in Webb and Dodd, 1941; foci discussed in Webb, 1948).

**SOURCES:**


**Belcher Focus (Fulton Aspect)**

The Belcher Site on the west bank of Red River in Caddo Parish, Louisiana, has provided the basis for this focus (Webb, 1940; Webb and Dodd, 1941; Krieger, 1946). The excavations of Clarence B. Moore (Moore, 1912) provide additional components at the McClure Place in Miller County, and the Friday, Foster, Moore, and Battle Places in Lafayette County, Arkansas, all on the alluvial valley of Red River. Close relationships with Texarkana Focus are evident in pottery and house types, with Mid-Ouachita Focus in some pottery types, and with Titus Focus in northeast Texas, particularly the Taylor Site in Harrison County.

**COMPONENTS:**

Type Component: Two upper levels at Belcher mound, Caddo Parish, Louisiana.

Other Components: McClure Site, Miller County, and Friday, Foster, Moore, and Battle Sites in Lafayette County, Arkansas; Gum Springs mound, Hot Springs County, Arkansas; last occupation at Crenshaw Site, Miller County, Arkansas; last occupation at Mound Plantation, Caddo Parish, Louisiana; part of material from Taylor Site, Harrison County, Texas, and other sites in Bowie, Cass, and Marion Counties, Texas, with mixed materials.

**TYPES OF SITES:**

Large villages on alluvial plain of Red River; smaller sites on tributary streams of other river systems.
HOUSES:

At Belcher Site, round, 30 to 42 feet in diameter, some having extended entranceway. Interior features include: central firebasin, and small posts or props where needed. Walls probably of woven cane and grass with clay covering; roofs constructed of poles, probably with grass thatch (Webb, 1940).

EARTHWORKS:

Most sites have no mounds; doubtful that Belcher people built any mounds entirely. At Belcher Site, mound erected by earlier people increased in height by covering over abandoned or burned houses with clean sand, then building new ones over them. At Battle Site, a very large platform had been erected by an earlier (Haley Focus?) people and was greatly increased in height with a superstructure and ramp, probably by Belcher Focus people, as shown by excavations in 1948 by Krieger and Howard (Moore, 1912, found evidence only of Belcher Focus at Battle).

LIVELIHOOD:

Agriculture based on maize, beans, squash presumed, supplemented by hunting of deer, small game, and birds; wild plant foods; some shellfish.

CERAMIC TRAITS:


Temper: Many of the best vessels have no visible temper; otherwise, small amount of sand, clay-grit, or pulverized shell and tufa. Shell temper occurs frequently in Belcher Ridged, Cowhide Stamped, and Foster Tailed-Incised, seldom if ever in other types.

Features: Red filming occurs occasionally in Hodges Engraved, possibly in Taylor Engraved, but is absent
in other types. Strap handles occur rarely. Applique work uncommon. Effigy bowls with head and tail of bird or animal attached to rim; four-legged effigy vessel of turtle; rattle bowls; rattle bowls with four vertical legs resting on ring base; noded bowls. Dente- tate stamping on type Cowhide Stamped.

Elbow pipes, equal-armed.

Perforated disks made from potsherds (spindle whorls?). Ornaments, such as small nose or lip plugs.

Figurines, human and bird, perforated for use as pendants or for attachment to vessels (?)

ARTIFACTS OF CHIPPED STONE:

Projectile Points:
   Arrow Points: Bassett type; less frequently, Maud and small variant of Perdiz type.
   Dart Points: None definitely associated.

Snub-nosed scrapers, small, thin, triangular.

Spall scrapers with edge retouching.

Drills, small, thick.

Knives, long, oval to double-pointed, uncommon.

ARTIFACTS OF GROUND STONE:

Milling stones and manos (?).

Pitted stones (“nut stones”).

Hones of brown sandstone.

ARTIFACTS OF POLISHED STONE:

Petaloid celts.

Zoomorphic pendants of slate and limestone (rare).

Earspools, limestone, copper-covered (Foster Place).

ARTIFACTS OF SHELL:

Conch-shell dippers, plain and incised (one from Belcher has rattlesnake-eagle design).

Circular conch-shell gorgets with swastika and cross designs.

Long pins, some with knob at head, of conch shell.
Small disks, rectangles of conch shell, probably inlays for wooden objects.
Conch-shell beads: disk-shaped and cylindrical.
Conch-shell pendants in zoomorphic shapes.
Perforated mussel shells (so-called "hoe blades").
Mussel-shell spoons found in burial vessels.

ARTIFACTS OF BONE AND ANTLER:
Bone and antler projectile points with hollow bases.
Bone labrets and ear ornaments.
Polished, tapered bone pins.
Polished, double-pointed, thin awls.
Flaking tools (?) of deer ulna.
Awls, of bone splinters with only tip polished.

ARTIFACTS OF COPPER:
Thin sheeting used rarely to cover faces of stone and wooden artifacts.

MISCELLANEOUS TRAITS:
Fragments of twilled basketry, 4-over, 1-under weave of split-cane elements (found charred at Belcher mound).
Quartz crystals, unworked (charms?).
Bear-tooth beads, perforated at one end.

BURIAL CUSTOMS:
Interments usually single, but some multiple, containing up to seven individuals. Extended, usually on back.
Offerings profuse, include pottery vessels placed all around skeleton, ornaments left where worn in life, and various weapons and utensils. Cemetery areas near village, but dead also put in graves dug through house floors and into previously built mound.

RELATIONS:
Pottery types Cowhide Stamped, Foster Trailed-Incised shared with Texarkana and Mid-Ouachita Foci.
Belcher Ridged, Belcher Engraved, and Belcher Plain found in Hatchel Site, Texarkana Focus, as minor types or trade ware.
Avery Engraved of Texarkana occurs as trade ware in Belcher mound.

Ripley Engraved of Titus Focus occurs as trade ware in Belcher mound.

Belcher Engraved and Belcher Ridged occur in Taylor Site of Titus Focus, probably made there rather than traded.

Taylor Engraved shared with Titus Focus; Bailey Engraved and Hodges Engraved with Titus, Texarkana, and Mid-Ouachita.

Bassett and Maud arrow-point types shared with Texarkana Focus.

ESTIMATED AGE:
1200-1500 A.D. or part thereof.

SOURCES:

Texarkana Focus (Fulton Aspect)

This focus is principally defined on the basis of excavations in three sites 10 to 12 miles northwest of Texarkana, in Bowie County and on or near the flood plain of Red River. The E. H. Moores Place is reported to have a plowed-down mound about 50 feet in diameter and four feet high, containing midden refuse, and a cemetery area nearby. The Paul Mitchell Place has a large cemetery and two midden areas nearby. The A. J. Hatchel Place has a mound over 25 feet high (also known as the Janes Mound) and a cemetery area about 200 feet to the northeast of it. The Moores graves were excavated by the University of Texas in 1932, and in 1938-1939 the University of Texas and WPA made large-scale excavations in the Hatchel mound and cemetery, as well as in the Mitchell cemetery. In addition, a number of other sites in Bowie and Cass Counties have yielded collections closely agreeing with these, and several of the sites
Components of Texarkana Focus lie at the heart of the Caddoan archeological region, as do those of the earlier Haley Focus. The initial construction of the Hatchel mound was, in fact, by Haley Focus people, those of the later complex adding to its height by the construction of numerous houses and accumulation of midden refuse. Certain continuities, particularly in pottery shapes and designs, are apparent between Haley and Texarkana Foci. Both produced a high frequency of well-fired, dark, highly polished vessels with beautifully executed engraved designs. The Belcher, Mid-Ouachita, and McCurtain Foci are all also closely related to Texarkana and Haley in the excellence of their pottery, but whereas Haley Focus lacks shell tempering, the foci of Fulton Aspect used it in varying amounts. Shell temper appears much more frequently in McCurtain Focus pottery than in the others; in Mid-Ouachita, Texarkana, and Belcher it appears with fair frequency in some types, rarely in others, and not at all in still others. The historic Glendora Focus probably derived its ceramics in part from each of these prehistoric foci, with its shell temper being as common as in the McCurtain Focus, if not more so.

A preliminary analysis of the Hatchel and Mitchell collections was made in 1942 by Krieger, but this rich complex has yet to be described in detail. The trait list below is based on the preliminary analysis, with pottery types brought up to date.

COMPONENTS:

Type Component: Upper levels of the Hatchel mound and adjacent cemetery, Bowie County (Krieger, 1946, p. 207).

Other Components: Cemetery and midden areas at the Mitchell and Moores Sites, Bowie County; smaller collections in Red River, Bowie, and Cass Counties; part of material from Battle, Foster, Friday, and McClure
Sites on Red River in Arkansas (Moore, 1912); part of material from Ozan 11 and Ozan 15 Sites, and probably others in Hempstead County, Arkansas (Harrington, 1920).

**TYPES OF SITES:**

Chief known components are large villages close to Red River, on or near the floodplain and subject to periodic overflow. Overflow has caused village site material to be buried in sediments, except for mounds, middens, and cemetery areas in slightly raised knolls. Sites near smaller rivers generally small.

**HOUSES:**

Sixteen excavated at Hatchel Site were at different levels in upper part of mound, circular, 15 to 25 feet in diameter, extended entranceway pointing east or southeast. Small interior supports present, but central firebasin and large interior posts rare or absent.

**EARTHWORKS:**

People of this focus started few, if any, mounds. At the Hatchel Site and perhaps elsewhere, they added considerably to a mound erected by an earlier people. At Moores Site, it has not been proved that the "mound" was an intentional construction, as it consists mainly of midden. More data needed.

**LIVELIHOOD:**

Charred corn and beans provide direct evidence of agriculture at Hatchel Site; intensive agriculture inferred for other sites. Crops supplemented by hunting, fishing, gathering of wild food products and shell fish (charred pecans found at Moores Site).

**CERAMIC TRAITS:**

Pottery Types: An unusually large number of types found here because of central position and sharing of types with neighboring complexes. Most common are Barkman Engraved, Avery Engraved, Simms Engrav-
ed, McKinney Plain, Nash Neck Banded, and Foster Trailed-Incised. Minor types are Hatchel Engraved, Hempstead Engraved, Hodges Engraved, Taylor Engraved, Bailey Engraved, Bowie Engraved, Keno Trail- ed, Cass Appliqued, and Cowhide Stamped. Belcher Engraved, Belcher Ridged, and Belcher Plain found in minor amounts and may be trade ware from Belcher Focus; Friendship Engraved of Mid-Ouachita Focus occupies same position. Ripley Engraved of Titus Fo- cus clearly trade ware.

Temper: Utility pottery generally has clay-grit temper, with pulverized shell added occasionally as in type McKinney Plain. Polished pottery generally has no temper, a small amount of fine sand, or pulverized shell. Nash Neck Banded, Simms Engraved, Avery Engraved, Foster Trailed-Incised, and Cowhide Stamp- ed are those most frequently shell-tempered; Keno Trail ed and Bowie Engraved occasionally have this feature; the remaining types do not.

Features: Red film occurs frequently on Avery En- graved although not always in conjunction with shell temper; it is rare on Bowie Engraved and absent or nearly so on all other types. Designs are frequently repeated four times on all engraved and trailed-in- cised types. McKinney Plain jars are quadrated with single appliqued fillets or nodes on rim or body, or both; McKinney jars sometimes have four slight peaks on rim. Nash Neck Banded vessels frequently have rim pulled up into four high peaks so that mouth looks square from above. Two or four small strap handles may be present on jars. Dentate stamp used to decorate jars of Cowhide type. Rattle bowls; noded bowls; effigies.

Elbow pipes, with spur projecting beyond bowl or folded against bowl.

Perforated disks made from potsherds (spindle whorls?).
ARTIFACTS OF CHIPPED STONE:

   Projectile Points:
   Arrow Points: *Bassett* and *Maud* types.
   Dart Points: A few found on these sites, but association indefinite.
   Drills: Small, with expanded base (rare).
   Scrapers: Spalls, generally unshaped except for retouched edges.
   Knives: No data.

ARTIFACTS OF GROUND STONE:

   Small, unshaped milling stones.
   Manos, unshaped pebbles.
   Pitted stones ("nut stones").
   Hones of brown sandstone.

ARTIFACTS OF POLISHED STONE:

   Small, flat, rectangular adzes.
   Petaloid celts of green Ouachita Sandstone.

ARTIFACTS OF SHELL:

   Carved conch-shell pendants.
   Short, cylindrical conch-shell beads.
   Pin with knobbed head, carved from conch-shell columnella.
   Perforated mussel shells (so-called "hoes").

ARTIFACTS OF BONE:

   Projectile points, stemmed, cut from bone.
   Polished bone pins, tapered with spatulate heads; heads decorated with lines, notches, and may have hole for threading.
   Polished labrets.
   Tubular beads.
   Flaking tools of deer ulna and split cannon bone.
   Rattles made of turtle shells containing pebbles.
   Bear and dog teeth, perforated at root end for suspension on necklace.
   Deer jaws with polished diastrema.
   Deer calvarium, section trimmed out with stubs of ant-
lers, probably strapped on head for stalking deer or dance costume.
Awls of deer ulna.

ARTIFACTS OF COPPER:
Small strips of hammered copper sheeting, small holes at end as though for suspension.

MISCELLANEOUS TRAITS:
Burial of dogs.

BURIAL CUSTOMS:
Interment in extended position, usually on back, with ceramic offerings around head and shoulders; less frequently, at sides or feet. Single interments the rule although from two to four in a grave are known.

RELATIONS:
Various pottery types shared with Belcher, Mid-Ouachita, and McCurtain Foci.
Trade pottery from same foci and from Titus Focus.
One sherd of *Coles Creek Incised* from upper component of Hatchel mound.
One sherd of *Chase Incised* from Hatchel Site village area.
Novaculite imported from Arkansas, used for some projectile points.
Turquoise bead indicates trade with Rio Grande Puebloans.
Certain vessel forms (sharp-shouldered bowls and carinated bowls) appear to have been borrowed from Texarkana Focus by Puebloan Indians of north-central New Mexico through trade contact or intermarriages in the 15th or 16th century (Krieger, 1946, pp. 221-235).

With Titus and McCurtain Foci, Texarkana shares trait of neck-banding, which may have been borrowed from Puebloan culture in early Pueblo IV times, 14th or 15th century (Krieger, 1946, pp. 237-241).
ESTIMATED AGE:

From 1200 or 1300 A.D. to 1500 or 1600 A.D.

SOURCES:


*Mid-Ouachita Focus (Fulton Aspect)*

As the known components of this focus occur entirely within southwest Arkansas, we are not directly concerned with it except that it shares a number of traits with Texarkana, Titus, and Belcher Focus. A number of extensive excavations were made by the University of Arkansas and WPA in 1938-1941, none of which has been published, although Krieger has examined and photographed much of the pottery stored in Fayetteville. Data on house floors, graves, and other artifacts is not available to us at present. No mound building has been reported, whereas amateur collectors have obtained huge amounts of fine pottery from village and cemetery sites.

This focus appears to have been centered in the upper drainage system of Ouachita River, from the area west of Hot Springs downstream to well below Arkadelphia. Components also occur between the Ouachita and Red Rivers, as seen in much of the pottery from Hempstead County illustrated by Harrington (1920). Dr. and Mrs. T. L. Hodges of Bismarck, Arkansas, published some of their data and illustrated typical vessels from the Watermelon Island Site, located on an island in Ouachita River a few miles above Arkadelphia (Hodges and Hodges, 1943). Subsequently the same authors published a theory that this or similar sites were the archeological representatives of the Cahinnio Caddoan-speaking tribe encountered by De Soto in crossing from the Arkansas to Red River in 1541-1542 (Hodges and Hodges, 1944-45). Although it is strange to report, no European contact material has ever been found in any southwest Arkansas sites, despite diligent search by the Hodges and other amateur archeologists. On the other hand, the De Soto expedition was not equipped to trade with the Indians and there
is little if any chance that objects referable to it will be found. It is therefore quite possible that the Cahinnio Caddo did live in the Arkadelphia vicinity and that they were seen by De Soto, but had disappeared by the time that Henri De Tonti and other French explored this area nearly 150 years later.

Amateur archeologists report that all, or nearly all, graves which contain typical pottery of this focus, are single interments, extended on the back, with vessels around the head and shoulders, sometimes along the legs and close to the feet. This method is the common one of most Fulton Aspect foci.

The pottery types Friendship Engraved, Means Engraved, Blakely Engraved, and Military Road Incised are the common diagnostic ones for this focus and do not, apparently, occur elsewhere in the Caddoan Area. Hodges Engraved is shared with Belcher Focus and to a less extent with Texarkana and Titus Focus of Texas. Hempstead Engraved is shared with Texarkana Focus; Bailey Engraved with Texarkana, Titus, and Belcher; Taylor Engraved with Belcher and Titus; Keno Trailed with Texarkana, Belcher, and Titus; Foster Trailed-Incised with Belcher and Texarkana; and Cowhide Stamped with Belcher and Texarkana. There is a particularly close relationship between Mid-Ouachita, Texarkana, and Belcher Focus not only in these specific types but in the general tradition of producing a great deal of dark pottery—gray, brown, gray-brown, and black—whereas Titus Focus pottery is not only of lower quality but of much lighter colors.

Mid-Ouachita Focus may be said to reveal the finest of all Caddoan potteries although other foci in the area of the great bend of Red River would not be far behind, or the Spiro Focus in eastern Oklahoma. The present plates illustrating the types named above will reveal this high quality. Mid-Ouachita also contains more effigy ware than any other Caddoan foci, bottles in particular being modeled after both human beings and animals (Plate 23, A-C, F). Furthermore,
these vessels are often complete effigies (although highly conventionalized), whereas those of other Caddoan foci consist mainly of bowls with heads and tails attached to the rims; the latter may also at times have conventionalized limbs, wings, or fins attached at the sides (Plates 22, 23). This effigy work featuring complete forms may have been the result of influence from the St. Francis Focus of eastern Arkansas, where these are even more spectacular and more numerous. In the latter case, however, they are usually done with light buff-colored pottery and painted white and red. Trade vessels of typical St. Francis ware have been found in several Mid-Ouachita components, supporting their contemporaneity.

Oddly, all surrounding foci of the Fulton Aspect reveal some red filming, while Mid-Ouachita pottery does not, so far as we are aware. Shell temper occurs frequently in such types as Foster Trailed-Incised and Cowhide Stamped, only occasionally in Military Road Incised, and rarely if at all in the other types. Rattle bowls, common in other Fulton Aspect foci, appear to be absent, as do the four legs standing on a ring base, reported from Belcher, Texarkana, and Frankston Focus.

One very special trait of Mid-Ouachita is the peculiar "seed jar", a fat, high vessel with convex sides, the top covered over except for a small round aperture, and often with vertically-perforated lugs in opposed pairs, near the base and top. We illustrate one of these in Plate 7, H, but its shape is more cylindrical than most, and its design unique. Hodges and Hodges (1943, Plate 11; 1944-45, Plate 19 center row) illustrate more typical ones. Glen L. Evans once suggested that these would serve perfectly as tobacco humidors, which if true would constitute a unique Indian invention.

Our estimated age for this focus is approximately 1200 to 1600 A.D. or the greater part thereof.

McCurtain Focus (Fulton Aspect)

A McCurtain Focus was first defined by Baerreis (un-
published manuscript, 1943) on the basis of two components excavated by the University of Oklahoma and WPA in McCurtain County in the southeast corner of Oklahoma. These are the Clement and McDonald Sites, the general features of which are described by Bell and Baerreis (1951). Other components were recognized in a survey of McCurtain County, and several are known in Red River County, Texas, although detailed information is available only from the Sam Kaufman Site (Harris, 1953).

The Clement Site (not to be confused with Clements Site in Cass County, Texas) contained three mounds, all apparently flat-topped temple mounds. In one of them a large grave was found, containing ten skeletons. Although such graves are generally associated with the Gahagan and Spiro Foci, the grave offerings of pottery vessels and ornaments in this case leave no doubt that it belongs to McCurtain Focus.

COMPONENTS:

Type Components: Clement and McDonald Sites, McCurtain County, Oklahoma.

Other Components: Kaufman, Buchanan, Hooks Ferry, Atkinson, and Norris Sites, Red River County, Texas; probably others in northwestern Bowie and northeastern Lamar Counties. In Oklahoma, probably others in McCurtain and Choctaw Counties. All sites appear to be within 25 miles of this section of Red River valley.

TYPES OF SITES:

Villages on terraces of Red River or tributary valleys close to it; cemeteries in refuse areas, but burials placed in temple mounds as well.

HOUSES:

Most of those excavated at Clement Site were square to rectangular, 17 to 25 feet long. Extended entrance-way marked by two parallel trenches (in which posts were placed ?), roofs supported by either two or four
large central posts. At McDonald Site, a circular house found, diameter 18 feet, no centerposts, entranceway indicated by two parallel trenches (Bell and Baerreis, 1951, Fig. 2).

LIVELIHOOD:

Agriculture, supplemented by hunting, fishing, and gathering of wild plant foods.

EARTHWORKS:

Three flat-topped temple mounds at Clement Site, one of which was also used as a burial tumulus. No other components are known to have mounds of any kind.

CERAMIC TRAITS:

Pottery Types: Avery Engraved and Nash Neck Banded recognized by Bell and Baerreis (1951) at Clement and McDonald Sites; same types and Simms Engraved recognized by Harris (1953) at Kaufman Site. New types Hatchel Engraved and Bowie Engraved also occur in some of these sites. Other types remain to be defined, especially in utility ware.

Temper: Abundant pulverized shell common, especially in polished vessels; clay-grit or shell in utility vessels.

Features: Red film common, often combined with shell temper, in type Avery Engraved; also occurs in Bowie Engraved. Utility vessels often have neck-band ing, four rim peaks, two or four small strap handles, and applique features, including small nodes in place of handles.

Bi-conical elbow pipes (diameter increases both at the bowl and toward the stem end).

Long-stemmed pipes (association uncertain).

Perforated disks made from potsherds (spindle whorls?).

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow Points: No type names designated yet, but described as having stems with side or corner notch-
ing, and triangular with edges of blades recurved and serrated.

Dart Points: More frequent than arrow points; include types *Gary* and *Ellis*, probably others not yet defined.

Knives: Ovate and asymmetrical forms found infrequently.

Scrapers: Ovate, found infrequently.

Hoe Blades: Pear-shaped outline, roughly chipped, found infrequently.

**ARTIFACTS OF GROUND STONE:**

- Milling stones.
- Manos, usually of fine-grained sandstone.

**ARTIFACTS OF POLISHED STONE:**

- Celts, shaped by chipping, only one end ground to cutting edge.
- Celts, petaloid, shaped all over by grinding and polishing.
- Pair of earspools, each with concave face covered with copper sheeting; inner flange divided into two sections by broad transverse groove (from burial in temple mound at Clement Site).

**ARTIFACTS OF BONE AND ANTLER:**

- No data.

**ARTIFACTS OF SHELL:**

- Small beads of shell and *Lithospermum* seeds.
- Pearl beads (from fresh-water mussels).
- Disk-shaped beads.
- One incised gorget with voluted-circle or swastika motif in center (from burial in temple mound at Clement Site) (Bell and Baerreis, 1951, Pl. 10, No. 8).

**ARTIFACTS OF COPPER:**

- Thin sheeting on earspools.

**MISCELLANEOUS TRAITS:**

- Pitted hammerstones.
Quartz crystals, tips consistently showing marks of abrasion.
Spherical balls, shaped by pecking.
Lumps of green pigment, found in pottery vessels in burials.

BURIAL CUSTOMS:
As a general rule, interments were single, extended on back, with pottery placed around head and shoulders. The large grave in the Clements Site temple mound was exceptional in several ways and indicates a survival of practices from Gibson Aspect: it was apparently started at the mound surface and dug all the way through to its base; there were cedar posts near the four pit corners and approximately ten skeletons (three extended, two fully flexed, the others fragmentary and indeterminate); and the offerings were not only on and between skeletons, but placed against the pit walls. Offerings included 24 pottery vessels, 21 arrow points, three pottery pipes, the earspools and shell gorget mentioned above, one celt, green pigment in two vessels, pearl beads, Lithospernum seed beads, and disk-shaped shell beads.

RELATIONS:
Sharing of pottery types Avery Engraved, Simms Engraved, Nash Neck Banded, Hatchel Engraved, and Bowie Engraved with Texarkana Focus (other types listed for Texarkana are absent or rare).
Keno Trailed occurs as trade ware, perhaps from Mid-Ouachita Focus.
Square and rectangular houses with two or four large centerposts and extended entranceways are closely allied to those of Spiro Focus.
One round house without central posts but with extended entranceway (at McDonald Site) is closely allied to those of Texarkana Focus at Hatchel Site and to Belcher Focus at Belcher Site, Louisiana.
Shell gorget with voluted-circle motif is similar to one at Hatchel Site, and both are similar to gorgets from Tennessee and adjacent states, commonly assigned to Southern Cult complex; however, they are unlike the motifs on shells and gorgets from Spiro Focus and probably belong to a later phase of the Southern Cult.

Sharing of certain bowl shapes and neck banding of utility pottery with Puebloan IV culture is like that described for Texarkana Focus.

A somewhat later chronological position than that of Texarkana Focus is suggested by greater proliferation of shell temper, absence of some Texarkana pottery types, and presence of trade beads in Kaufman Site (Harris, 1953). Historic Glendora Focus traits not present.

ESTIMATED AGE:
1400-1700 A.D.

SOURCES:
Baerreis, manuscript; Bell and Baerreis, 1951, pp. 53-61, Plate 10, and Figure 2; Harris, 1953.

HISTORIC STAGE

It is difficult to set a definite date-line for the beginning of historic times in East Texas, as well as other parts of Texas. The first contact between Indian and European would automatically mark this event, were it not that there is usually a great deal of uncertainty about which tribes were met, where they were located at the time, and how much they may have moved before being again recorded in later centuries. Furthermore, the first explorers were seldom equipped to carry on trade (that is, with glass beads, iron knives, copper bracelets, etc., which they intended to give the Indians in reward for services and information). With the establishment of trading posts and missions, the chances improve tremendously that an archeological site can be definitely identified in time and tribal affiliation.

In East Texas the first Europeans who almost undoubt-
edly entered the area of Caddoan-speaking Indians were the survivors of the De Soto expedition, who, with Luis de Moscoso in command, attempted to reach present Mexico overland from the Mississippi River in 1542. They are believed to have crossed Red River not far from its great bend, and continued southwestward until they reached a river, beyond which they dared not continue because of what their guides told them about the “wild” Indians beyond. Swanton (1942, pp. 31-32) has identified this as Trinity River, which appears reasonable because at that point Moscoso must certainly have passed out of the peaceful agricultural Caddoan Indians and faced the “wild” or nomadic, non-agricultural Indians of central Texas.

About 145 years later, in 1686-1687, La Salle and some of his followers visited the same general area in which Moscoso had found Caddoan villages, even some of the tribal names being easily recognized in the later account. His route from Lavaca Bay toward the Illinois country would naturally have taken him through Caddoan territory. Approaching this from the southwest, he would first have met those tribes which the French called Cenis and the Spanish Tejas. The Spanish knew them by the name Hasinai as well although this term applied to a confederacy of tribes in a small area.

In 1690, the first Spanish mission was established among the Nabadache and Neches tribes, members of the Hasinai confederacy; and from then onward there were numerous contacts between the East Texas Indians and both Spanish and French traders, missionaries, and diplomats. In 1714 Fort Natchitoches was established at present Natchitoches in central Louisiana, but the French had explored far up Red River well before that, meeting the tribes which belonged to another confederacy, that of the Cadohadacho, from which the English word Caddo is derived. As a general rule, we can say that extensive trade and missionary contacts between the Tejas and Cadohadacho tribes, and both Spanish and French, were well under way by 1700 A.D.
On the other hand, a different side of the picture has usually been neglected. Soon after 1600 A. D., the Spanish began to colonize present New Mexico seriously and had carried an abundance of trade goods northward from present central Mexico. In northeastern Mexico (in the states of Coahuila and Nuevo Leon) no less than eight important settlements had been established between 1555 and 1596. Furthermore, we know from the account of Moscoso that the Tejas Caddo had already built up a trade relationship with the Pueblo Indians of New Mexico before 1542, because the Tejas had cotton blankets and turquoises which they obtained from people far to the west, to whom they carried bois d'arc and salt in exchange. Not only this, but comparative archeological studies have shown that this trade contact was in existence for at least 100 years before Moscoso (Krieger, 1946, pp. 207-210).

If the trade mechanism for carrying objects back and forth between East Texas and central New Mexico had been going on for a century or two at least, before the Spanish colonized northern Mexico and present New Mexico, then it is easily possible that objects of Spanish manufacture were carried eastward to the Tejas and other Caddo shortly after 1600. We must even allow for the possibility that such materials were carried from Coahuila or Nuevo Leon before 1600. It is perhaps not mere accident that the European objects found in early historic sites are almost entirely colored glass beads and rusted fragments of iron knife blades, objects which would have had great appeal and been easy to carry great distances.

Allowing thus for an Indian trade far in advance of actual white settlement, we find it necessary to be rather vague about an opening date for the Historic Stage in East Texas. This certainly began by 1700 A. D. and could have begun as early as 1600 A. D. if not even earlier.

Two historic foci have been defined, Allen for the Tejas, and Glendora for the Cadohadacho and their allies along Red River and farther east. Glendora may have
begun somewhat later than Allen. Certain other sites cannot be placed in either of these as yet and will be discussed separately.

Allen Focus (Fulton Aspect)

The components of this focus, so far as known at present, occur in northwestern Cherokee County, eastern Anderson County, northeastern Houston County, southeastern Henderson County, and western Nacogdoches County. The main concentration is between the towns of Frankston and Jacksonville. There is no doubt that Frankston Focus is the pre-historic ancestor of Allen Focus, for several pottery types continue into it. New pottery types were added, as well as new types of chipped-stone artifacts. The Perdiz type of arrow point was replaced by two others: Cuney and Turney. Individual site reports will clarify these distinctions in more detail.

COMPONENTS:

Type Component: Jim Allen Site, Cherokee County, excavated in 1935 by University of Texas.

Other Components: Patton, Jowell, Owens, Cecil, and Freeman Sites in Anderson County; King Site in Nacogdoches County; small surface collections in Henderson and Houston Counties, E. W. Hackney Site, Cherokee County.

TYPES OF SITES:

Small villages situated along minor streams, most if not all having a cemetery area in or adjacent to village refuse.

HOUSES:

No data.

EARTHWORKS:

None.

LIVELIHOOD:

Agriculture, supplemented by hunting, fishing, gathering of wild foods.
CERAMIC TRAITS:

Pottery Types: *Patton Engraved* the principal type; *Hume Engraved* minor; *Killough Pinched, Maydelle Incised* continued from Frankston Focus in small amounts; most of utility pottery not yet defined by type. Bowls with effigy attachments and rattle bowls continued from Frankston.

Temper: Predominantly fine sand or mixed fine clay-grit and sand.

Features: *Patton Engraved* characterized by extensive use of ticking (short spurs or tiny triangles attached to lines at right angles) whether design consists of parallel lines around rim, groups of lines arching toward one another on rim, spirals, or concentric circles on body (Plate 52). This ticking easily distinguishes Allen Focus pottery from Frankston.

Elbow pipes: Decorated with engraving or punctating, red and white pigments rubbed into design; others plain and less well made than Frankston.

ARTIFACTS OF CHIPPED STONE:

Projectile Points:

Arrow Points: *Cunev, Turney* types diagnostic; *Talco, Fresno, and Alba* also occur; *Perdiz* rare.

Dart Points: No definite associations.

Knives: *Jowell* type, a unique form with long, slender blade pointed or slightly rounded at both ends, very finely chipped over both faces; oval in cross-section; all known specimens rubbed smooth on both edges and faces alike. *Anderson* type, another unique form, very broad but widest part near one end where two nearly straight edges meet in a blunt point, opposite end tapered and rounded at tip. Diamond-shaped knives alternately beveled on all four edges, or on the two edges of one end and opposite end rounded.

Scrapers: Small snub-nosed form, and finely chipped spalls.
ARTIFACTS OF GROUND STONE:
No data.

ARTIFACTS OF POLISHED STONE:
Small petaloid celts of fine-grained sandstone.
A fine-grained blue stone adze blade with flat faces.
A splendid cylindrical club head of steatite, encircled by a broad groove.

ARTIFACTS OF SHELL:
Small barrel-shaped beads and double-pointed pins, of conch columnellae.

ARTIFACTS OF BONE AND ANTLER:
No definite associations.

BURIAL CUSTOMS:
Single interments, extended on back, vessels around head and shoulders.

MISCELLANEOUS TRAITS:
Hollowed-out tablets (paint palettes?) of blue-gray slate.

RELATIONS:
European items include glass beads, iron knife fragments, small cone of sheet brass. Trade vessels of Avery Engraved and Simms Engraved (see Hunt, Clements, and Kaufman Sites, below, for probable source area and time period).

ESTIMATED AGE:
1600-1800 A.D.

SOURCES:
Krieger (1946) extended Frankston Focus into historic times, but Allen Focus was later defined for the historic material.

Glendora Focus (Fulton Aspect)
This focus represents historic Caddoan-speaking tribes
in extreme northeast Texas, much of northern Louisiana, and a small part of eastern Arkansas. A number of tribes must be represented along Red River from well above its great bend downstream as far as present Natchitoches in central Louisiana, although few such tribes have yet been identified definitely with particular sites. Walker (1935) identified the Fish Hatchery Site at Natchitoches with the tribe of the same name living there when the French established Fort Natchitoches in 1714. Moore (1909) excavated many graves in the Keno and Glendora Sites in the Ouachita River valley of northeastern Louisiana, identifying them with the Ouachita Indians after whom the French named this river. Although, like the above-mentioned sites, the Douglas and Greer places in the lower Arkansas River valley revealed European articles of glass, brass, and iron in the graves with typical Glendora Focus pottery, Moore (1908) was unable to determine which Caddoan groups lived in that part of Arkansas.

The Womack Site near Red River in northern Lamar County, Texas, likewise has produced European trade goods and should represent one of the Caddoan groups, although it is probably too far upstream for the Cadohadacho—a tribe mentioned frequently in French and Spanish accounts as the leading up-river group, in contrast to the Natchitoches farther down and the Tejas (Hasinai, Cenis) villages to the southwest in Texas.

The ceramics of these and similar sites are remarkably uniform in their complex engraved designs, usually applied to the bottoms of carinated bowls which have an outflaring rim (Plate 51), and in the great abundance of shell temper. McCurtain is the only other focus with shell temper in comparable amounts. Glendora Focus utility ware remains to be analyzed and described, so has not been included here. Webb (1945, pp. 67-70) has listed a number of sites with “typical” vessels and sherds of the type Natchitoches Engraved, and thus included these sites (or parts of them) in Glendora Focus. These are: Clements Site in Cass County, Texas, as described by Dickinson (1941); some material at
Battle mound in Lafayette County, Arkansas, as reported by Moore (1912), with further excavations by M. P. Miroir; Watermelon Island Site near Arkadelphia, Arkansas (Hodges and Hodges, 1943); Belcher Site in Caddo Parish, Louisiana (Webb and Dodd, 1941); and Hatchel Site in Bowie County, Texas (information provided Webb by Krieger in 1944). It must be stressed that at the time of Webb’s writing, the type Hodges Engraved (Plates 32, 33) had not been recognized and that in all the cases just mentioned the vessels once classed as “Natchitoches Engraved” must now be classified as Hodges Engraved. In other words, these sites (except Clements) are not historic and contain no Glendora Focus material; they are listed herein under Belcher, Texarkana, and Mid-Ouachita Focus, all without sign of European contact.

On the other hand, the non-shell-tempered Hodges Engraved type almost certainly was a late pre-historic ancestor of Natchitoches Engraved, a change in vessel forms, use of shell temper, and a greater complexity of scroll designs being the principal changes that took place with the beginning of historic times. Other types probably also shared in the ancestry of Natchitoches Engraved, such as Ripley Engraved of Titus Focus, which in rare cases also has designs of engraved and punctated scrolls on the bottoms of carinated bowls (Plate 58, K-O); and Taylor Engraved (Plates 65, 66).

COMPONENTS:

Type Components: Fish Hatchery Site (Walker, 1935) and Lawton Site (Webb, 1945), both on Cane River, a slough of Red River near Natchitoches, central Louisiana.

Other Components: Excavations at Glendora and Keno Sites in Ouachita River valley, northeast Louisiana (Moore, 1909); Douglas and Greer Sites in lower Arkansas River valley (Moore, 1908); Allen Plantation and Wilkinson Place in hills northwest of Natchitoches, Louisiana, where J. A. Ford found European
trade goods in some graves (Webb, 1945); Womack Site, Lamar County, Texas (University of Texas collections). Also graves excavated by M. P. Miroir and J. T. Hughes in northeast Texas. All of the above-listed sites yielded European trade goods in graves with Natchitoches Engraved pottery. Four or five sites in northeast Texas have this pottery but no trade goods; however, they have not been properly explored. No components yet reported from Oklahoma or southwest Arkansas.

TYPES OF SITES:
Rather small villages located on or near major rivers in broad, fertile valleys; cemetery areas in or adjacent to villages.

HOUSES:
No data.

EARTHWORKS:
None.

LIVELIHOOD:
Agriculture, supplemented by hunting, fishing, and food gathering (known from early historical documents).

CERAMIC TRAITS:
Pottery Types: Natchitoches Engraved most characteristic and diagnostic type. Hudson Engraved another diagnostic type, shell-tempered. Keno Trailed continued from pre-historic foci; Cowhide Stamped, and Glassell Engraved possibly continued in small amounts. Utility pottery not yet analyzed by type.
Temper: Shell common, probably few exceptions.
Features: Red filming occasionally used in Natchitoches Engraved but not other types; quadration of design in all types the rule, but Natchitoches Engraved sometimes has three or five units; handles or lugs, applique not reported. Some four-legged animal effigy vessels. Rattle bowls not reported.
Simple elbow pipes, crudely made, without decoration.

ARTIFACTS OF CHIPPED STONE:
Projectile points, both arrow and dart, reported but not
analyzed by type. Most are in private collections, grave association uncertain.

**ARTIFACTS OF GROUND STONE:**
No data.

**ARTIFACTS OF POLISHED STONE:**
Petaloid celts.

**ARTIFACTS OF SHELL, BONE, AND ANTLER:**
No specific data.

**BURIAL CUSTOMS:**
Single interments, extended on back, with pottery around head and near body. Walker (1935) reported two horse skeletons buried at Fish Hatchery Site, each with a large, thick, pottery bowl near head.

**MISCELLANEOUS TRAITS:**
Very pronounced fronto-occipital head deformation reported by Walker (1935).

**RELATIONS:**
Trade with Europeans shown principally by glass beads and iron knife fragments; probably other metal artifacts as well in some sites.
Trade with historic Natchez Indians shown by intrusive vessels of Fatherland Incised.

**ESTIMATED AGE:**
1650-1750 A. D., perhaps beginning earlier or lasting later.

**SOURCES:**

*Hunt and Clements Sites (Fulton Aspect)*

In 1932, A. T. Jackson of the University of Texas recovered numerous pottery vessels and other artifacts from the Clyde and Jay Clements farm 2½ miles west of Atlanta, Cass County. These were from 22 graves which had been badly torn up by treasure hunters, but Jackson found some materials remaining intact in most of them. Five of the 22
graves had glass trade beads in them. Mr. S. C. Dickinson was given a collection of pottery from this site by Mr. Will Scott, on which he has published a brief paper (Dickinson, 1941). Dr. D. A. Baerreis located still other fine vessels in the American Museum of Natural History during the war, sending sketches and notes to Krieger.

Also in 1932, Jackson excavated 17 graves on the Goode Hunt farm 8 miles west of Atlanta, recovering 81 vessels and many other artifacts. In this case, no glass beads were found in any grave, and a piece of iron from one of them was believed by Jackson to have fallen into the pit during excavation (field notes). For this reason, Jackson believed that the Hunt Site was slightly older than Clements—that is, it just preceded European contact.

The pottery vessels and other artifacts from these two sites are closely similar, some vessels being virtually identical. They would appear to date in the earliest contact times, somewhere between the prehistoric Texarkana and Titus Foci on the one hand, and historic Glendora Focus on the other. They perhaps indicate a separate focus.

Shell temper is very infrequent in these sites, most of it appearing in the type Simms Engraved, which is also shell-tempered in pre-European Texarkana and McCurtain Foci. Instead, there is no temper in some of the finest vessels, fine-clay grit in others, and fine to coarse pulverized bone in still others. The type Hodges Engraved is definitely present in both large and miniature bottles, while Natchitoches Engraved has not been noted. The types Barkman Engraved, Avery Engraved, Foster Trailed-Incised, and Cowhide Stamped, all common in the pre-historic Belcher and Texarkana Foci, have not been noted in either the Hunt or Clements Sites; however, both McKinney Plain and Nash Neck Banded of Texarkana Focus are present but rare. Two types not noted elsewhere are also present: Cass Appliqued and Clements Brushed (Plates 11, 12). Some vessels appear to be like the large compound bowls of Titus Focus, but with somewhat different designs consisting of long oval panels.
bisected by a horizontal line. Three vessels are like Hudson Engraved of Glendora Focus in having finely cross-hatched bands set horizontally and in arcs (Plate 36), but have fine clay-grit temper instead of shell. Some utility jars have rows of fingernail punctuations of diagonal incised lines around the rims, somewhat like those of Titus Focus, and are either clay-grit or bone tempered.

Other traits noted by Jackson include lumps of green and gray pigment (some inside of grave vessels), red ochre pigment in one grave, red and white pigments in engraved designs, conch-shell pendants shaped like insect effigies, mussel shells pierced for hafting (so-called “hoe blades”), one dog burial with a vessel enclosed, manos, and pitted stones. Projectile points are very small, with pointed stems somewhat like the Perdiz type, and pottery pipes are of the elbow form, simple and poorly made as in Glendora Focus.

In summary, these two sites appear to belong to a short transition period with survivals of some Texarkana and Titus Focus traits, but preceding the appearance of Natchitoches Engraved and other Glendora Focus traits. The graves, as in most Fulton Aspect units, were single interments with bodies extended on the back with vessels about the head, shoulders, and legs. It is supposed that they date between 1600 and 1700 A.D., allowing for the possible appearance of European goods in advance of colonizing activities and missions.

**Kaufman Site (Fulton Aspect)**

This site in northern Red River County has been explored to some extent by R. K. Harris and assigned to McCurtain Focus on the basis of such pottery types as Avery Engraved, Simms Engraved, and Nash Neck Banded (Harris, 1953). It is the only McCurtain Focus component so far known which includes European trade goods in the graves, and is of interest in indicating that this complex extended into a time of early contact. As in the case of the Hunt and Clements Sites, its date would seem to be somewhere between 1600 and 1700 A.D.
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**FIGURE 2**

Chart showing position of Texas culture complexes in the four general stages used in this study. Note that a Neo-American Stage is missing in Southwest Texas. The use of “Branch” and “Phase” in extreme western Texas follows that of archeology in New Mexico and Arizona; otherwise, “Aspect” and “Focus” are used to conform with practice in the Eastern United States and Great Plains.
FIGURE 3
Location of excavated sites of the Paleo-American Stage in Texas.
Approximate extent of known culture complexes in the Archaic Stage in Texas. While archeological material is found in quantity in the areas marked "undefined", research has not progressed far enough to define complexes; excavation and stratigraphic control of material are especially needed.
FIGURE 5

Approximate extent of known culture complexes in the Neo-American Stage in Texas. While large parts of the State have not yet been properly analyzed for this stage, it is absent in the Southwest section.
Principal complexes and sites of the Historic Stage in Texas. The Bravo Valley Aspect in the west, and Rockport Focus on the coast, extended from the Neo-American Stage into historic times. The Allen Focus is the early historic outgrowth of the prehistoric Frankston Focus. Glendora Focus components are found principally in northern Louisiana and Arkansas. Kaufman is the only known component of McCurtain Focus to extend into early historic times. The Spanish Fort archeological site is found on both sides of Red River. Many Spanish mission sites in Texas are also archeological sites, but are not shown for lack of specific analysis.
Part II

SELECTED POTTERY AND PROJECTILE-POINT TYPES

* * * *

DESCRIPTIONS AND ILLUSTRATIONS
CADDOAN POTTERY TYPES

avery engraved

(Plates 1, 2)

PASTE

Temper: Usually finely pulverized shell (most of vessels shown). Otherwise fine clay-grit (Plate 1, E, F) or no temper (Plate 2, B, L).

Texture: Fine compact except when shell particles have leached away leaving paste soft and full of fine cavities.

Color: Commonly covered with bright, hard red film made of powdered red ocher (most of vessels shown). Otherwise shades of brown and gray from medium to dark and nearly black (Plates 1, B, E; 2, C, E, J, L). Just under red film most usual surface color is buff, which shows in design lines cut through film. Cores gray, brown.

Surface finish: From poorly to fairly well polished.

FORM

Wall thickness: 3 to 5 mm.

Lip: Rounded and flush with rim or turned outward slightly.

Base: Slightly convex to flat but no thicker than side walls.

Vessel shape and size: Most common is compound bowl with low, conical bottom, large rounded shoulder area turned inward, and high rim curving outward (Plate 1, A, C-E, G, H). Mouth diameter generally greater than that at shoulder. Many of these are magnificent vessels, diameters ranging from 10 to 40 cm. and perhaps more. Compound bowl with vertical rim (Plate 1, B) unusual. Very deep, nearly cylindrical bowls with sides slightly convex or with rims gently curving outward (Plate 2, A, B, D, F, I) are also common and range from 6 to 20 cm. or more in height. Bottles (Plate 2, C, E, G, K) also fairly common. Other forms include small jars (Plate 2, H), squat bowls with outflaring rims (Plate 2, J), and carinated bowls with convex rim standing vertically (Plates 1, F; 2, L). Small strap handles may occur rarely (Plate 2, H).

DECORATION

Treatment: Engraving.

Designs: Center around semicircular motifs usually repeated four times around vessel. Each unit may consist of several concentric semicircles, all plain lines, plain lines alternating with ticked lines, narrow bands with large spurs jutting from one edge, cross-hatched bands with spurs, and various combinations. A common dividing element between these units consists of two vertical lines between which a reversed S-shaped line is drawn, with short lines.
pointing toward its ends from the flanking lines (best seen in Plate 1, I, L). Straight lines and step-frets may be combined with curved lines. Spirals, whorls, scrolls, circles, and negative disks outlined by cross-hatched areas are all combined in a wide variety of pleasing designs. Rims of compound bowls usually bear simple horizontal lines widely spaced but may be plain on the one hand (Plate 1, H) or more elaborately decorated on the other (Plate 1, A-A'). Selected examples of shoulder designs on compound bowls in Plate 1, I-P, with N also including rim decoration of "eyes" like those of type Bowie Engraved (Plate 8). The very deep bowls may have rim designs like those described (Plate 2, A, B, D) or completely angular motifs repeated many times around vessel (Plate 2, F, I); these are regarded as a distinct variety within the type. Red pigment may occasionally appear in lines of dark vessels and in at least one case, white pigment provides contrast on a red-filmed vessel (Plate 2, B). Usually, however, the red film provides a strong contrast with the light buff-colored clay exposed by engraving.

CULTURAL AFFILIATIONS

Very common in McCurtain Focus, with many vessels having both red film and shell temper. Also a Texarkana Focus type but relatively less frequent there and neither shell temper nor red film used as much as in McCurtain Focus components; moreover, some red vessels have clay-grit or no temper, and some shell-tempered vessels lack red film. A few vessels occur in Titus Focus components (Plates 1, E-G; 2, B) where they appear to be trade pieces from either McCurtain or Texarkana Focus, or both. In one case (Harris, 1953) this type appears to be associated with European trade material; otherwise it is pre-European but probably relatively late within the Fulton Aspect.

DISTRIBUTION

Choctaw and McCurtain Counties in southeast Oklahoma; Lamar, Red River, and Bowie Counties in northeast Texas; probably southwest corner of Arkansas along great bend of Red River. May occur more widely as trade ware.

ESTIMATED AGE

1400-1700 A.D., perhaps beginning earlier or surviving later.

REFERENCES

Krieger, 1946, Figure 18.
BAILEY ENGRAVED
(Plate 3)

PASTE
Temper: Fine clay-grit or a little sand, or both. Pulverized shell in specimens from central Arkansas (A, C).
Texture: Fine, compact. Surface may feel slightly sandy.
Color: Surfaces buff, light to dark brown, gray to nearly black. Cores gray to black. Fire-mottling only on lighter-colored vessels.
Surface finish: Smoothed to well polished.

FORM
Wall thickness: 3 to 5 mm.
Lip: Rounded, usually turned sharply outward.
Base: Convex or only slightly flattened, no thicker than sides. “Extended base” or pedestal not infrequent, hollow and wall about same thickness as body wall (H, K).
Vessel shape and size: Principally small bottles with spouts varying in shape: vertical, out-flaring, slightly tapered, or bulging slightly in middle (C, D). A few ollas known with globular bodies and small mouths (J). Ollas considerably larger than largest bottles.

DECORATION
Treatment: Engraving, punctating.
Designs: Sets of concentric arcs placed around body in two ways: upper sets arch upward, lower sets arch downward, fitting under the upper arches. Arches always repeated four times around body. The four uppermost lines form a square around the spout base which is often filled with small punctates made through the polished surface (D-H, J, K). The spaces at the base may also be punctated (F). Red, and occasionally white, pigments occur in lines.

CULTURAL AFFILIATIONS
Infrequent occurrence in any one site but widely spread in components of Titus, Belcher, Texarkana, and Mid-Ouachita Foci.

DISTRIBUTION
Whole northeast corner of Texas, northwest corner of Louisiana, and southwest Arkansas to vicinity of Hot Springs. Not reported from southeast Oklahoma but could occur there.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
None.
BARKMAN ENGRAVED  
(Plate 4)

PASTE
Temper: Often none visible; also fine clay-grit or (rarely) fine white pulverized substance which may be bone. 
Texture: Fine and compact to somewhat granular. Well fired, fairly hard. 
Color: Surfaces usually various shades of dark brown and dark grayish brown, ranging to nearly black. Lighter shades of brown and gray appear, particularly with mottling due to uneven firing. Cores dark gray to black. 
Surface finish: Exterior and interior both well smoothed to highly polished.

FORM
Wall thickness: Extreme range from less than 2 to about 8 mm.; average 5 mm. 
Lip: Very thin and rounded; may be turned outward slightly. 
Base: On most small bowls the bottoms are shallow and evenly convex without distinct base; on large carinated bowls the base is a flat round disk to which the body wall is attached. 
Vessel shape and size: Only definitely known shape is that of carinated bowl, in two varieties: (1) with rim either quite vertical or inclined outward slightly, 3 to 5 cm. high, and body consisting of shallow, evenly convex basin of less height than the rim; (2) larger bowls with straight vertical rim 5 to 7 cm. high, and body shaped like truncated cone of definitely greater height than the rim (contrast M and Q in Plate 4 with specimens at top). Bottles formerly included in this type are now considered as Hatchel Engraved (Plate 29).

DECORATION
Treatment: Engraving and (rarely) fingernail punctations between lines. 
Designs: Confined to bowl rims. Usually two or three horizontal lines at top, below which is a zone of narrow bands arranged in rectilinear patterns. Occasionally the patterns are compromises between rectilinear and curvilinear, as in Figures C, H, I, M, P. The bands may be filled with cross-hatching, with short dash lines singly or in pairs, with tiny punctates made through the polished surface, or with a row of fingernail punctations as in Figure G. Fine ticking occurs on some lines. Design units commonly repeated four times around rim. Many unique combinations made, as exemplified by the sketches. When pigment present in lines, it is usually white, but red and green occur.

CULTURAL AFFILIATIONS
Type apparently belongs exclusively to Texarkana Focus, even trade pieces being almost unknown in other foci. Relationships apparent in the designs (but not vessel forms) of Simms Engraved (Plate 62) and Belcher Engraved (Plate 5).

DISTRIBUTION
Confined to a small area about great bend of Red River in southwest corner of Arkansas and northeast corner of Texas in Bowie and Cass Counties.

ESTIMATED AGE
1200-1600 A.D. or part thereof.

REFERENCE
Krieger, 1946, p. 230 and Figure 18.
BELCHER ENGRAVED

(Plate 5)

PASTE
Temper: None visible, or occasionally fine shell or tuff particles although these seldom abundant enough to suggest intentional addition to clay.
Texture: Fine, compact.
Color: Mahogany brown to black but shading off into dark gray-browns; buff or reddish brown occasionally. Cores darker than surface. Mottling.
Surface finish: Smoothed to well polished. Bowls same on exterior and interior; bottles not smoothed at all inside, polished outside.

FORM
Wall thickness: 3 to 6 mm.
Lip: Rounded, direct on most bowls, turned outward on bottles and some bowls.
Base: Convex on bowls; convex to slightly flattened on bottles.
Vessel shape and size: Webb and Dodd (1941, pp. 90-96 and Plates 15, 16) first described type with 15 “sub-types” more or less equivalent to a variety of shapes. Most of these not now regarded as included in this type but assigned to others such as Hodges Engraved, Glassell Engraved, and Taylor Engraved. Plate 5 shows range of forms now placed in this type: most common are bottles (C, J-M) and small bowls with rounded bottoms, narrow shoulder bent upward and inward at sharp angle, and rim bent outward again to about same angle as body below shoulder (B, F-I). The compound vessel (D) is of the latter form surmounted on a globular lower chamber. A third form, less common, has rounded bottom, high side slanted inward and low rim bent outward (A, E). Other forms may be added eventually. Bottles may reach height of 25 cm.; bowls have diameters of 10 to 28 cm.

DECORATION
Treatment: Engraving, punctating.
Designs: On narrow shoulder area they are much like Simms Engraved except that at four points where pattern is repeated there is a small node jutting straight out from edge of shoulder (not visible in photographs on opposite page). In addition the rim is decorated with from one to three encircling lines and one or two rows of engraved dash lines or tiny punctates cut through finished surface. Four tiny lobes may appear on lip, directly above nodes on shoulder (B). Bottle designs also consistently show short dash lines between concentric circles and flower or star-like elements in center of each of the four sets of concentric circles (C, J-M). Both white and red pigments found in designs.

CULTURAL AFFILIATIONS
A Belcher Focus type, with trade pieces found in Texarkana Focus components. Some vessels made by easternmost Titus Focus people. The dark colors, good polish, and both dash lines and punctuates show affinities with Barkman Engraved and Simms Engraved of Texarkana Focus.

DISTRIBUTION
Red River valley of northwest corner of Louisiana and southwest corner of Arkansas; extreme northeast Texas.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
Webb and Dodd, 1941, pp. 90-96; Krieger, 1946, Figure 18; Webb, 1948.
BELCHER RIDGED
(Plate 6)

PASTE
Temper: Pulverized shell, fine clay-grit, occasionally pulverized bone.
Texture: Compact, brittle; breaks with sharper edges than most Caddoan area pottery, hardness 3.0 or more.
Color: Surfaces pale yellow, orange-yellow, light brown, light to dark gray, etc., generally with considerable fire-mottling.
Cores gray to black.
Surface finish: Interiors smoothed but seldom polished; exteriors covered with fine ridges except in rare cases where smoothed areas alternate with ridged areas (A, B).

FORM
Wall thickness: Range 3 to 6 mm., average 4 mm.
Lip: Rounded and turned outward (D, H, I, K, L) but more often considerably thickened and nearly round in cross-section (E, G, J, M).
Base: Usually convex and vessels do not stand up well; sometimes partly flattened (A, B, M).
Vessel shape and size: Peculiar drop-shape is typical, widest part below mid-section, height ranging from 7 to 33 cm. Jar shape with everted rim (A, B) quite rare, as are handles. A few examples of globular jars (D, H, L) generally much smaller than drop-shapes.

DECORATION
Treatment: Ridging, incising.
Designs: Incising may be used to make lines under the short out-turned rim (H, K, L). Otherwise the vessel (with exceptions like A, B) is completely covered with tiny ridges close together and vertically placed. Presumably the still-plastic clay was grooved with a broad, flat tool; if so, it was skillfully done with ridges very evenly spaced. Possibly the ridges were sometimes applied to surface, for they sometimes come loose like applique work and the ridges may be closer together at the neck than on the middle of the body (as on G).

CULTURAL AFFILIATIONS
Bossier and Belcher Foci. Minor type or trade ware in Texarkana Focus and most eastern components of Titus Focus. Apparently had a rather long life without being spread far from the central area.

DISTRIBUTION
Found rather widely in northwest quarter of Louisiana, extending into easternmost counties of northeast Texas, and Miller and Lafayette Counties in southwesternmost Arkansas. Crooks site, central Louisiana.

ESTIMATED AGE
1100-1500 A. D. The clay-grit and bone-tempered specimens of Bossier Focus are earlier than the shell-tempered specimens of Belcher Focus. The latter may be estimated at 1300-1500 A. D. while the Bossier Focus is older, perhaps 1100-1300 A. D.

REFERENCES
Webb and Dodd, 1941, pp. 101-102, Plate 17; Krieger, 1946, Figure 18; Webb, 1948, pp. 113-114, Plates 11, 13, 14.
BLAKELY ENGRAVED
(Plate 7)

PASTE
Temper: Usually none; otherwise finely pulverized shell or small amount of sand.
Texture: Fine, compact.
Color: Shades of gray and gray-brown from light to dark and nearly black. Occasionally olive-gray tone, light to dark. Better-made vessels (A-G) evenly colored without fire-mottling; such vessels as H, I, have mottling but typological status uncertain. Cores dark gray to black.
Surface finish: Fair to good polish.

FORM
Wall thickness: 3 to 6 mm.
Lip: Rounded, turned outward.
Base: Usually convex, otherwise somewhat flattened.
Vessel shape and size: Principally or entirely bottles with spouts either of even diameter or tapered slightly and then expanded at mouth. A marked angle appears in lower body in some cases (A). Use of three large, hollow legs expanded at the feet is not uncommon (E, F). The cylindrical vessel form with small mouth at top and four small lugs perforated vertically is a peculiar development in the Ouachita River valley, usually undecorated (Hodges, 1945); this specimen possibly of Blakely type because of design.

DECORATION
Treatment: Engraving.
Designs: Very simple but striking, consisting of groups of three or five parallel lines running down body. When vertical, these sets are repeated two, three, or four times (A-C, I), and usually if not always contain three lines. When they slant across the body they contain five lines and have short curved spurs of hatched bands and single lines on either side of the main set (E, F). The two outermost of the five lines may end or bend outward toward the ends of the bands (D, G), and there may be border lines encircling the top of the body (E-G). The five-line sets appear only twice, on opposite sides of the body, so far as has been determined. The curved lines on the body of H contain three to a set in some places, four in others. Vessel I employs three sets of three lines each. Red pigment sometimes appears in lines.

CULTURAL AFFILIATIONS
Mid-Ouachita Focus exclusively. Trade pieces might be expected in adjacent complexes.

DISTRIBUTION
Southwest Arkansas, particularly in Clark, Hot Spring, and Garland Counties.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
Dr. and Mrs. T. L. Hodges, 1945, pp. 107-108 and Plate 19, panel 3. The original name of Blakelytown Engraved has been shortened by agreement.
Bowie Engraved

(Plate 8)

Paste
Temper: Usually none; otherwise finely pulverized shell.
Texture: Fine, compact except when shell particles have leached out, leaving paste soft and filled with tiny cavities.
Color: Dark grays and browns except when covered with red film made of powdered ochre (H). Cores gray, brown to nearly black.
Surface finish: Smoothed to fairly well polished.

Form
Wall thickness: 2 or 3 to 5 mm.
Lip: Rounded and flush with rim or turned outward slightly.
Base: Evenly convex on carinated bowls, flatter but no thicker than side walls on deep bowls and bottles.
Vessel shape and size: Small carinated bowls with shallow bottoms and high rims either vertical or slanting outward slightly (A, D, F, G); small but very deep simple bowls with rim curving outward slightly from body (H); and possibly some very large, globular bottles known only from sherds.

Decoration
Treatment: Engraving, excising.
Designs: Small units repeated a large number of times around vessel. Units may be chevrons, triangles, arrow points, drop-shaped, or elongated with "eye" at end or at center (C, F'; see also Plate 1, N). From one to four simple horizontal lines lie above these units on rims of carinated bowls; on the very deep bowls (H) the units are on rim interior just below lip and border line, if any, is below them. The very large bottles are almost entirely plain, having only a series of units similar to the "eyes" around body just below spout. White and red pigments in lines of darker vessels.

Cultural Affiliations
McCurtain and Texarkana Foci. The former seems to have more of the very deep, red-filmed bowls, often with shell temper, similar to those in type Avery Engraved (Plate 2); Texarkana Focus appears to have more of the shallow carinated bowls with neither red film nor shell temper, similar to those in type Barkman Engraved (Plate 4). The vessels classified as Bowie Engraved might be assigned to the two other types except that they are linked by the unique designs. These definitely do not conform to the common insistence on four-times repetition of Avery, Barkman, and many other Caddoan types.

Distribution
Same as Avery Engraved. Also occurs as trade ware in Titus Focus (H).

Estimated Age
Same as Avery Engraved but unknown so far from historic sites.

References
None.
BULLARD BRUSHED
(Plate 9)

PASTE
Temper: Clay-grit; occasionally pulverized bone.
Texture: Coarse but not crumbly.
Color: Surfaces vary from cream to light yellowish brown and medium to dark brown. Cores gray to dark brown and black. Much fire mottling.
Surface finish: Poorly smoothed inside, roughened by brushing on outside.

FORM
Wall thickness: 4 to 9 mm.
Lip: Convex and either direct or turned outward.
Base: Round, thick, flat disk to which wall is attached.
Vessel shape and size: Jars with rims that curve gently into body (A-D, H, G), tapered vessels (E), and jars with rim meeting body at slight angle (F). Vessel I appears to be a conical bowl although it may have been refashioned from the lower part of a broken jar. Size ranges from small vessels like C and E to large jars 35 cm. or more in height (H). Soot and grease stains indicate cooking function.

DECORATION
Treatment: Brushing, punctating.
Designs: Bodies covered with brushing usually vertical but may run crosswise or diagonally (H, G). Rim may be brushed horizontally or vertically and from two to four horizontal rows of fingernail punctates made through the brushing (A, B, E, F). Fingernail punctates may be made end-to-end in rows (C) or in pinched ridges (D). Two opposed strap handles (C) or solid lugs (B, E) sometimes appear on Frankston Focus vessels.

CULTURAL AFFILIATIONS
Principally a Frankston Focus type, also occurs in Titus Focus. Similar in general shape and coarse paste to La Rue Neck-banded (Plate 42) and Maydelle Incised (Plate 46), both of which are also found in both Frankston and Titus Focus components. The three types together constitute the utility ware of Frankston Focus and part of that of Titus Focus. Classification of all three types is difficult unless rim present, for brushed body sherds could belong to any of them. They also account for the very high incident of brushed body sherds in Frankston Focus as compared with pottery of all other Caddoan complexes.

DISTRIBUTION
Principally in drainage areas of Neches and upper Sabine Rivers. Becomes less frequent eastward in Sulphur River drainage area where Titus Focus components are found. Carried westward into central and north-central Texas as trade ware, as other Frankston Focus types; specimen B from Coleman County.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
Krieger, 1946, Figure 18.
CANTON INCISED
(Plate 10)

PASTE
Temper: Abundant clay-grit in which pulverized sherds sometimes recognized. Pulverized bone may be added to clay-grit.
Texture: Coarse but firm.
Color: Shades of brown from light to dark with chocolate predominating. Some fire-mottling but no strongly contrasting colors. Cores dark.
Surface finish: Both exterior and interior smoothed but rarely polished. Surfaces retain ripples from use of smoothing tools.

FORM
Wall thickness: Range about 4 to 9 mm., average about 6 mm.
Lip: Rounded or slightly flattened but not thickened.
Base: Flat, circular disk to which body wall attached.
Vessel shape and size: Cylindrical vessels most characteristic, ranging in height from 15 to 42 cm. and perhaps more, in diameter from 12 to 38 cm. and perhaps more (D, E, H and rim sherds F, G). Also carinated bowls, diameter ranging up to more than 30 cm., rims straight and vertical or sloping inward or outward (A and rim sherds B, C). Small hemispherical bowls (I). Two suspension holes may occur in rim of cylindrical vessels.

DECORATION
Treatment: Incising, punctating, fingernail impressions.
Designs: Parallel diagonal lines around rim, all same direction (B), alternating in direction (A), alternating with intervening spaces filled with small punctates or fingernail marks (D, E, H), nested together in hachures (F, G), or crossed in diagonal grid (C). Also small triangles filled with punctates, pendant from horizontal borderline (I). Always confined to rim.

CULTURAL AFFILIATIONS
A Sanders Focus type. Similar incised and punctated designs are known in most other Caddoan foci, widely in southeastern United States, and elsewhere. However, their use on rims of carinated bowls and cylindrical vessels constitutes a very special trait, limited to Canton type and Sanders Focus; occurrence of this combination elsewhere indicative of trade relationship. The type has been reported from Nelson Focus in Choctaw County, Oklahoma (Bell and Baerreis, 1951, pp. 48-53), but its components are just across Red River from Sanders Site in Lamar County.

DISTRIBUTION
From southern Choctaw County, Oklahoma, southward to vicinity of Grand Saline on upper Sabine River in Van Zandt County, Texas; westward into Fannin County; eastward to Titus County. Trade sherds recognized as far west as Dallas area and Lake Whitney on middle Brazos River.

ESTIMATED AGE
Later part of Gibson Aspect, possibly 1000 A. D. but could be earlier or later. Cross-dated with Haley Focus by trade pottery in both directions.

REFERENCES
Krieger, 1946, pp. 185-190, Figure 14, Plate 28; Bell and Baerreis, 1951, pp. 48-53.
CASS APPLIQUED
(Plate 11)

PASTE
Temper: clay-grit. Occasionally fine shell or bone particles added.
Texture: Fairly fine, compact, well-fired.
Color: Surfaces cream, pale gray, light yellow-brown to medium brown, orange-brown. Some fire mottling. Core about same as surface.
Surface finish: Interiors smoothed; exteriors nearly covered with applique fillets and marks of tools along their bases where fillets were welded to vessel surface.

FORM
Wall thickness: Range 4 to 6 mm., average 5 mm.
Lip: Rounded, turned outward.
Base: Flat to slightly convex, somewhat thicker than walls.
Vessel shape and size: Small jars only. Bodies squat, globular (D) to elongate (F); rims turn outward but not sharply.

DECORATION
Treatment: Applique and punctates; occasionally brushing.
Designs: Principally consist of numerous fillets, 3 to 5 mm. wide, stuck to body either straight up and down (C-F) or in hachure patterns (A, A', B). Fillets cover entire body. Rims may be plain, brushed horizontally, or have from one to four horizontal rows of punctates. In one case (D) punctates of triangular shape are spaced at regular intervals around rim and down body between fillets. Thin brushing may appear running vertically in spaces between fillets. No rim or body quadrature.

CULTURAL AFFILIATIONS
A minor element in Titus and Texarkana Foci. District from Harleton Appliqued of Titus Focus because the latter occurs only in pre-European sites, whereas Cass Appliqued occurs not only in pre-European components of Titus and Texarkana Foci, but in the Hunt and Clements sites in Cass County as well, where some graves contained iron and glass artifacts. The Harleton and Cass types together constitute a unique elaboration of the applique technique which is absent in most Caddoan complexes.

DISTRIBUTION
The few specimens recognized so far are from a small part of northeast Texas in Morris, Cass, and Bowie Counties.

ESTIMATED AGE
1500-1700 A.D.

REFERENCES
None.
PLATE 11
CLEMENTS BRUSHED
(Plate 12)

PASTE
Temper: Clay-grit.
Texture: Coarse but compact, firm.
Color: Buff, light brown, gray-brown with considerable fire-mottling. Cores gray to dark brown.
Surface finish: Bowls smoothed inside, ollas not smoothed inside; exteriors roughened by decoration.

FORM
Wall thickness: 5 to 9 mm.
Lip: Rounded, rolled outward.
Base: Flat, circular disk or convex and no thicker than side walls.
Vessel shape and size: Those illustrated are most of the complete vessels on record. All but A are ollas and A perhaps should not be included; it is a large compound bowl 27 cm. high and 31 cm. across mouth. B is 23 cm. high and 25 cm. in diameter, with faintly angular shoulder well below middle. C-C' is slightly larger in the body than B but total height unknown; D-D' is taller than B but smaller in diameter. Two other specimens are about size of C-C'.

DECORATION
Treatment: Brushing; possibly some incising.
Designs: B-D' have four brushed areas on body, those on B and D-D' arching up from near base over shoulder and down again, those on C-C' going in circle. Specimens not illustrated also brushed in circles. Presumably brushing done with handful of grass while clay still plastic. Olla rims rough (B) or scraped and smoothed (D-D'). Large bowl A brushed horizontally on rim and lower body, has incised design poorly smoothed over on shoulder, repeated four times.

CULTURAL AFFILIATIONS
Found at Clements and Hunt sites in Cass County near Atlanta. Both sites have produced consistently similar ceramics and some graves have had European trade materials. However, most of pottery types of historic Glendora Focus have not appeared here and the vessels are mixtures of Texarkana and Titus Focus types. Assignment to any of these foci, or to a new one, awaits more field evidence.

DISTRIBUTION
So far recognized only at Clements and Hunt sites, Cass County.

ESTIMATED AGE
Somewhere between 1500 and 1800 A. D., perhaps historic or shortly preceding first European contacts.

REFERENCES
Not recognized previously. Dickinson, 1941, describes Clements Site and illustrates some of its finest vessels.
COWHIDE STAMPED
(Plate 13)

PASTE
Temper: Usually abundant, finely-pulverized shell; otherwise, fine clay-grit.
Texture: Fine, firm, well-fired, does not break easily.
Color: Dark shades of brown and gray; occasionally tan to cream. Cores gray to black.
Surface finish: Interiors smoothed to polished; exteriors same where not roughened by decoration.

FORM
Wall thickness: 2 to 4 mm. (thinnest pottery in Caddoan region).
Lip: Thin, rounded, turned outward.
Base: Always convex; vessels do not stand up well.
Vessel shape and size: Two principal forms: (1) globular bowls 12 to 20 cm. in maximum diameter, with short rims and mouths considerably smaller than bodies; (2) jars with very high rims flared outward so mouth diameter equal to or greater than body (A, D, G, J, L) and height up to 20 cm. or more. Webb collection has triple vessel, three small globular bowls joined at sides with struts of clay.

DECORATION
Treatment: Dentate stamping (both individual and rocker), incising, trailing, and punctating.
Designs: Most typical are graceful scroll bands repeated four times around vessel, the bands filled with longitudinal incised lines (C, E, M) or dentate stamps set close together across each band (F, H, I). Bodies may also bear simple arched bands (B) or sets of trailed concentric circles (K). The short rims of these bowls almost always are covered with dentate stamps placed vertically as units (E, I, K) or as rocker lines (B, C, M). Fingernail punctates in vertical rows on rim may substitute for stamping (F). The high-rimmed jars have scroll bands filled with dentate stamping on rim (G) or both rim and body (D). A few simulations of these techniques are classified as “Cowhide Stamped.” Thus, A is like D even though the bands are filled with simple punctates, and L is like G even though the cross-lines in the scroll bands are incised, not stamped.

CULTURAL AFFILIATIONS
Essentially a Belcher Focus type, but occurs in Texarkana and Mid-Ouachita Foci as minor element. Specimen L from Greer site in lower Arkansas River Valley (Moore, 1908) may prove type extended into European times. In Caddoan area proper, however, it is entirely pre-European. Shell temper is far more frequent in it than in other Belcher Focus types. An affinity with Foster Trailed-Incised (Plate 20) is seen in the shape of the tall-rimmed jars and in the sets of trailed concentric circles on the body of G; the Foster type also includes shell temper frequently.

DISTRIBUTION
Red River valley from Belcher site in northwest Louisiana to great bend area, extending into Bowie County, Texas; also in components of Mid-Ouachita Focus in southwest Arkansas and at Greer site, lower Arkansas River valley.

ESTIMATED AGE
1200-1500 A.D. Greer site specimen may date in historic times in that area.

REFERENCES
CROCKETT CURVILINEAR INCISED
(Plates 14-16)

PASTE
Temper: Clay-grit; occasionally pulverized bone added.
Texture: Coarse, lumpy, often crumbly. Temper particles often show on surface.
Color: Light, medium, and dark brown; reddish brown; gray-brown; rarely black.
Surface finish: Smoothed to polished.

FORM
Wall thickness: 4 to 10 mm.; usually 5 to 6 mm.
Lip: Usually plain rounded; also flat but unwidened, flat and widened (Plate 14, K), cambered (two convex edges meeting in ridge), thickened and circular in cross-section (Plate 14, E), and bent outward with scalloped edge (Plate 14, C).
Base: Convex and of even curvature and thickness across bottom.
Vessel shape and size: Most frequent form is carinated bowl, up to 40 cm. and perhaps more across mouth, rims upright or slanted outward slightly (Plate 14, C, F, H, I). Next most frequent are globular bowls with plain, cambered, or circular lips (Plate 14, E, G). Simple bowls (Plate 14, A, K) of minor importance but usually have two or four rims peaks. Cylindrical bowl (Plate 14, D), square bowl with slightly raised corners (Plate 14, B), and vessel with side wall stepped outward (Plate 14, J).

DECORATION
Treatment: Incising, punctating.
Designs: Many variations of scroll motif, plus alternating rings and triangles. A circle or ring is usually the central element, flanked by inclined bands or paired triangles. Flanks of inclined bands filled with punctates or parallel lines; circles and rings also filled with these but punctates and lines may be used alternately as fillers on same vessels. Inclined bands may be plain or have bisecting line down middle to connect bottom of one circle with top of next one. No ticking or cross-hatching has been noted. Punctates are plain, ring-like (made with hollow reed?), or hemiconical in shape. Design units often repeated four times (Plate 14, A, B, D, J) but repetitions up to 15 or more also common. Plates 15, 16 show further variations of designs, with F-M on Plate 16 being "hybrid" or blendings with those of Pennington Punctated-Incised. White and pale blue pigments found in designs, red ochre rarely.

CULTURAL AFFILIATIONS

DISTRIBUTION
From central East Texas to southwest Arkansas and eastern Oklahoma. Westward to middle Brazos River in central Texas at Chupek site near Waco. Trade sherds occur at Greenhouse site, central Louisiana (Ford, 1951).

ESTIMATED AGE
More or less entire time span of Gibson Aspect, some part of 500-1000 A.D.

REFERENCES
Krieger, 1946; Figure 19 ("Keoto Curvilinear Incised" now included with Crockett); Newell and Krieger, 1949, pp. 99-101, Figures 35-38; Ford, 1951, pp. 62-67.
DAVIS INCISED  
(Plate 17)

PASTE
Temper: Abundant coarse clay-grit and carbonized particles; occasionally some pulverized bone.  
Texture: From moderately coarse to very coarse, lumpy, and crumbly.  
Color: Various shades of yellowish brown, red (not filmed), reddish brown; occasionally gray-brown to black. Cores like surface.  
Surface finish: Smoothed but not often polished.

FORM
Wall thickness: 4 to 12 mm., average 6-7 mm.  
Lip: Rounded or flat but not thickened.  
Base: Usually convex; sometimes flat and thicker than side wall but not a separate disk to which wall was attached.  
Vessel shape and size: Most common are carinated and simple bowls ranging from 15 to 45 cm. across. Simple bowls have sides from slightly to pronouncedly convex (B, C, G), approaching hemispherical shape (A); some have sides slightly concave or recurved (D). Two or four rim peaks occur rarely (F). Carinated bowl rims slant inward or outward slightly or stand vertical (E, I). Bottles fairly common but known only from sherds (H). Also cylindrical and barrel-shaped vessels similar to those in type Dunkin Incised (Plate 18), and small jars indicated by sherds.

DECORATION
Treatment: Incising with lines almost always smoothed over.  
Designs: Horizontal lines encircling vessel rim or upper part of bottle body. Carinated bowls usually have lines only on upper half of rim (I), other vessel forms have them variable distances downward from lip. Lines occasionally "overhang", an effect produced by holding the cutting tool at a downward angle so that line is deepest along its upper edge.

CULTURAL AFFILIATIONS
Associated with Alto and Gahagan Foci of Gibson Aspect. Related to types Coles Creek Incised, Greenhouse Incised, and Hardy Incised of Coles Creek and Troyville complexes in Louisiana (described in Ford, 1951), all of which have simple encircling incised lines and include cylindrical and barrel-shaped vessels as well as simple and hemispherical bowls, but lack carinated bowls and bottles. Davis Incised can also be distinguished from them by considerably greater thickness of vessel walls, much coarser and softer paste, less polish, lack of thickened rims and incised lines on top of lip, reddish and reddish-brown colors, etc. Davis Incised also lacks very shallow bottom line and row of punctates sometimes found on Coles Creek and Troyville types. In Caddoan area it is closely related to Hickory Fine Engraved (Plate 31), the designs differing only in technique, and to East Incised of Haley Focus (Plate 19) as discussed under that type.

DISTRIBUTION
Central East Texas and northwest Louisiana, probably merging with above-mentioned Coles Creek and Troyville types in central Louisiana.

ESTIMATED AGE
Some part of span 500-1000 A.D.

REFERENCES
Newell and Krieger, 1949, pp. 116-118, Figure 45; Ford, 1951, pp. 76, 88, 126, 128, and charts.
DUNKIN INCISED
(Plate 18)

PASTE
Temper: Clay-grit; pulverized bone sometimes added, also carbon or sand.
Texture: Coarse, ranging from compact to crumbly.
Color: Light yellowish-brown, reddish brown, medium brown and chocolate. Cores gray, gray-brown, and same color as surface.
Surface finish: Poorly smoothed to fair polish, except for decorated parts.

FORM
Wall thickness: 4 to 8 mm.
Lip: Rounded, flush with rim, rarely widened and flat.
Base: Flat on cylindrical and barrel-shaped jars, rarely square; convex on bowls. Of same thickness as side wall in both cases.
Vessel shape and size: Primarily cylindrical vessels with sides straight to slightly convex, approaching barrel shape (A-C, E, H, K), height from 20 to 30 cm. or perhaps more. Carinated (I, J), simple (D, G), and compound bowls (F) are minor forms. The few square bases known are on cylindrical vessels (E, H). Handles, applique, unknown.

DECORATION
Treatment: Incising and fingernail punctations.
Designs: Sets of parallel lines in wide variety of straight-line patterns. Arranged in triangles, diamonds, hachures, simple parallel lines, and grids of crossed diagonals, placed around upper halves of cylindrical vessels, or over whole body, around rims of carinated bowls, and around variable parts of simple bowls. Remainder of body plain or covered with fingernail pinches or punctations (A, K). Zone just below lip left plain (C), filled with crossed diagonal lines (B), or with arched impressions like Weches type (H).

CULTURAL AFFILIATIONS
Primarily an Alto Focus type, but extending in form of jars into Haley Focus components. Above description covers only most definite inclusions, there being several unsolved problems (see Newell and Krieger, 1949, pp. 110-116 for discussion). Vessels originally described as Kiam Incised by Newell were included in Dunkin by Krieger in above publication, but are now separate again (Plate 40). Vessels with very closely spaced and crudely made incised lines and cross-lines, resembling brushing (Newell and Krieger, Fig. 44, A-E), are still of uncertain status. Dunkin as now defined closely resembles some vessels of Pease Brushed-Incised of Bossier Focus (Plate 53) and the latter may be an outgrowth of Dunkin; however, it lacks cylindrical vessels, carinated and simple bowls; and conversely, Dunkin lacks any evidence of applique, punctates placed in rows to divide design panels or in fillets, brushed surfaces between fillets, rim peaks, and handles. A relationship with Mazique Incised of lower Mississippi valley (described in Ford, 1951) may be assumed.

DISTRIBUTION
Principally in central part of East Texas but also in southwest Arkansas on Red River and in Clark County (East mound); not known if distribution continuous between these areas.

ESTIMATED AGE
Some part of span 500-1000 A.D.

REFERENCES
Krieger, 1946, Figure 19; Newell and Krieger, 1949, pp. 110-116, Figures 41-44.
EAST INCISED
(Plate 19)

PASTE
Temper: Fine clay-grit or small amount of sand.
Texture: Fine.
Color: Tan, various shades of brown and reddish brown. Red produced by firing temperatures on mottled surfaces (C, F) and surfaces also sometimes red-filmed (A, D, F, J, N). Cores brown, gray.
Surface finish: Smoothed but seldom polished.

FORM
Wall thickness: 3 to 5 mm.
Lip: Rounded and flush with rim.
Base: Usually convex on bowls, flat on other vessels.
Vessel shape and size: Small vessels, not over 18 or 20 cm. in greatest height or diameter. Simple bowls have convex, straight, or slightly recurved sides standing more or less vertical or sloping slightly inward or outward (A, B, D, G, H, J, M); rims may have two opposed peaks (D, H), four peaks (M); two opposed tabs built out on side of lip (J), and tabs may or may not have small pits sunk in center. An oval effigy bowl (E) has animal head at one end and pointed tail at other; the two peaks of bowl H suggest a conventionalization of this effigy form. Other vessels are cylindrical (C), barrel-shaped (F, N), barrel-shaped with broadest part below the middle (K) or above the middle (L), and deep bowl like truncated cone (I). Two opposed suspension holes in rim are common on upright vessels (F, I, K, L, N).

DECORATION
Treatment: Incised lines, partly or entirely smoothed over.
Designs: Horizontal lines encircling vessel rims, except where they are interrupted by sets of semicircular lines placed under rim peaks or effigy features (A, D, E). In at least one case (M) the lines are parallel with peaks and dips of rim. Vessel A was filmed after lines were cut and smoothed; vessels D, G, N have lines cut through film as engraving technique, but both methods included in this type for convenience. White pigment appears rarely in lines (B).

CULTURAL AFFILIATIONS
Belongs to Haley Focus but probably only to certain components such as the East mound in Clark County, Arkansas (all vessels in Plate 19 from there except J from Crenshaw site on Red River in Arkansas). A close relative of Davis Incised of Alto and Gahagan Foci (Plate 17) and thus related to certain Louisiana types in Coles Creek and Troyville complexes (see Davis Incised). East differs from Davis in apparent absence of carinated bowls and bottles, much finer paste and thinner walls, red film, suspension holes, much smaller size, effigies, rim tabs, dipping of lines under rim peaks, and perhaps in odd shapes such as K, L. Both have either two or four rim peaks, simple bowls, cylindrical and barrel-shaped vessels.

DISTRIBUTION
Southwest Arkansas from middle Ouachita River to great bend of Red River.

ESTIMATED AGE
Near end of Gibson Aspect time, possibly 1000 A.D.

REFERENCES
FOSTER TRAILED-INCISED
(Plate 20)

PASTE
Temper: Clay-grit or very abundant finely-pulverized shell.
Texture: Compact, fairly fine; rather soft, friable.
Color: Light to dark browns and gray-browns; cores generally
darker than surfaces. Some fire mottling.
Surface finish: Interiors smoothed to almost polished; exteriors
about same in few areas not gouged up by design work.

FORM
Wall thickness: 4 to 7 mm.
Lip: Rounded, turned outward slightly to sharply; outer edge
sometimes notched.
Base: Usually convex so vessel does not stand up well; some-
times flat.
Vessel shape and size: Small jars only, height 7 to 20 cm. One
of outstanding features is height of rim in proportion to
body. Fosterually rim and body are same height but
usually rim somewhat less. The globular bowl with short,
out-curving rim (H) is an exception. Rim may be nearly
vertical (D) but usually it flares outward so that mouth
diameter is notably greater than that of body.

DECORATION
Treatment: Incising, “trailing” (incising with a broad, round-
tipped tool), punctating, and applique.
Designs: Most common designs are those shown in A and B,
the high rim being divided into from two to seven hori-
zontal panels of incised lines usually running downward to
the left (A, B, C, F, G, L) but occasionally downward to
right or alternating in herringbone fashion. Incised rim
lines usually made completely across rim first, then di-
vided into panels with trailed lines cutting across them.
In some cases there are no trailed lines, but zones of in-
cised diagonals made separately (C, L). Other rim treat-
ments include diagonals made with fingernails instead of
incising (D) and horizontal lines made of fingernail im-
pressions end-to-end (I). Some of handsomest designs in-
clude large open scrolls of trailed or incised lines with
punctates in the flanks (J, K). Body designs consist mainly
of concentric circles repeated two, three, or four times
(usually four). An applique node, often split into three
tiny lobes, usually occurs in the center of each set of con-
centric circles. Other designs consist of sets of curved
lines hooked together (H, L) and concentric semicircles
(G). Plain bodies (C) are rare.

CULTURAL AFFILIATIONS
The trailed body designs bear an obvious affinity with those
of type Keno Trailed (Plate 39), but are simpler and the
vessel shapes are very different. The scrolls on J and K
suggest affinity with those of Cowhide Stamped (Plate
13). Foster Trailed-Incised belongs primarily to Belcher
and Texarkana Foci, but occurs in Mid-Ouachita Focus as
well. Foster and Cowhide, oddly, include most of the shell-
tempered vessels in all three of these foci.

DISTRIBUTION
Primarily in Red River valley from great bend downstream to
Belcher site near Shreveport; Bowie County, Texas; Little
River, Hempstead, Miller, Lafayette Counties, Arkansas.

ESTIMATED AGE
1200-1600 A.D. or part thereof. Not known in historic sites.

REFERENCES
Webb and Dodd, 1941 pp. 96-97; Krieger, 1946, Figure 18.
FRIENDSHIP ENGRAVED
(Plate 21)

PASTE
Temper: Usually none; sometimes small amount of fine clay-grit or sand.
Texture: Very fine, compact.
Color: Shades of reddish-brown and gray-brown from light to dark and nearly black. Cores cream to gray (note contrast with dark surface when latter cut away by designs).
Surface finish: Fair to good polish.

FORM
Wall thickness: 3 to 5 mm.
Lip: Rounded and flush with rim or turned outward slightly.
Base: Usually evenly convex on both bowls and bottles, but some bowls flat (I).
Vessel shape and size: Nearly all bowls and bottles. Carinated bowls have shallow bottoms and high rims, usually vertical but may slant inward or outward slightly; vessel F seems to be this form with rim slanted far inward and body molded into four lobes. Simple conical bowls (I). Small jar with squat body and rim slanted sharply outward (M). Peculiar vessel shaped like canteen is completely closed except for small opening at one edge (K-K'). One oval, boat-shaped vessel probably modification of carinated bowl (B). Bottles have vertical spout and widest part of body below middle (O-R).

DECORATION
Treatment: Engraving, punctating, applique.
Designs: Most typical are rectilinear panels of cross-hatched bands and plain or ticked lines flanking them (A-C). Arcs or semicircles may be substituted (D, F, G, I, K, M, N). Negative scrolls outlined by cross-hatched areas may be horizontal (E), slanting (H), or both (L). Bottles typically have low, polished applique ridges, single (Q), double (R), or triple (O), in two, three, or four sets, and on upper or lower parts of body or both. Bottle designs consist mainly of horizontal lines encircling upper body and sometimes ticked, plus cross-hatched bands running vertically (R), arched (O, P), or both (Q). Peculiar knobs may be molded to rim of carinated bowls (B, D). Bowls tend to repeat design four times, but two, three, five, six, and seven are known. Bottles tend to repeat two or three times, seldom four. Scrolls (E, H, L) may not belong to type. Red and white pigments occur in lines but contrast usually sufficient between dark surface and lighter core.

CULTURAL AFFILIATIONS
Principally a Mid-Ouachita Focus type but occurs also in Texarkana Focus. Use of ticked lines is somewhat like that of Means Engraved (Plate 47) of Mid-Ouachita Focus; shape and decoration of carinated bowls bear similarities with Barkman Engraved of Texarkana Focus (Plate 4).

DISTRIBUTION
Southwest Arkansas, especially Ouachita River valley, decreasing in frequency toward Red River valley but extending into Bowie County, Texas.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
T. L. and Mrs. Hodges, 1945, p. 103 and Plate 18, No. 1.
FULTON ASPECT EFFIGY BOWLS
(Plate 22)

GENERAL NOTES

These bowls may be expected almost throughout the area covered by the Fulton Aspect in Texas, Louisiana, Arkansas, and Oklahoma; they also occur in other parts of the Eastern United States. A, I, probably from Texarkana Focus association; B, C, Titus Focus; D, F, H, J, K, Allen Focus; E, G, Frankston Focus. Temper, texture, color, and finish variable, depending upon general features of focus in which specimen belongs; however, none in Caddoan area known with shell temper. Form quite similar, in all foci, consisting entirely of bowls shaped like truncated cone, varying only in steepness of sides, and bearing two modeled attachments on opposite sides of the mouth. The crenelated attachments (A, D, F, G, K) are probably highly conventionalized bird-heads (the point of A is divided like a beak). Opposite these crenelated attachments are figurines of animals and human beings, standing or sitting on small projecting platforms (A, D, F, H, K), or a simple projection like a bird tail (G). Effigies plainly of birds with prominent heads and tails are fairly common (C), while others are conventionalized and barely recognizable (E, I). Some bowls have two equal attachments, symbolizing creatures whose identity can hardly be guessed (B, J). Human heads are known on bowls in Arkansas, facing either inward or outward, but are very rare in Caddoan archeology. From three to five horizontal incised lines encircle the rim of all bowls of this class; the lines are usually smoothed over and they may or may not dip below the two attachments. Red and white pigments sometimes occur in these lines.

ESTIMATED AGE
1200-1700 A.D.

REFERENCES
None.
FULTON ASPECT EFFIGY VESSELS
(Plate 23)

GENERAL NOTES

These vessels reflect generally more advanced craftsmanship than the simple effigy bowls of Plate 22, and rather than being found throughout the Fulton Aspect, they tend to be associated with the elaborate ceramics of the Texarkana, Belcher, and Mid-Ouachita Foci. A, D, E, may be assigned to type Hodges Engraved. The full-bodied effigies B, C, F are actually bottles with hollow bodies and an opening in top of head about same diameter as those of ordinary bottles; they are confined to Mid-Ouachita Focus in Arkansas. A is a superb example of impressionistic modeling, the spout set at the back of the head rather than at center, and two sides of face bearing different designs; the left eye has below it a three-pointed “Weeping Eye” symbol (see also Plate 32, G) while the right eye is encircled by a ticked scroll line. The effigy J-J’ is also an elaborated bottle, probably representing a turtle; the top of the body is decorated in the manner of pottery type Belcher Ridged (Plate 6), and a panel on each side has a design as on bowls of type Glassell Engraved (Plate 25). Bowl I is like those of Plate 22 except that two small appendages at the sides represent wings or fins. Both I and J-J’ are from the Belcher Focus complex at Belcher mound, Louisiana. H is also a bowl, but globular rather than conical, and the turtle head is built out on the side rather than attached to the lip; it belongs to Texarkana or McCurtain Focus. G-G’ is a finely made bottle with walls only 2 mm. thick, entirely covered with red film, found at the Sanders Site in Lamar County (Krieger, 1946, Figure 16), but as it is shell-tempered and the fragments are from the surface, it is probably from a later occupation than that of Sanders Focus. The frog on one side is spread in normal swimming position for a frog; that on the other side has the forelegs in “crawl stroke” position. D, E, are red-filmed (Moore, 1909, Plates I, VII) but no other details are available.

ESTIMATED AGE
1200–1500 A.D.

REFERENCES

None. See type Means Engraved (Plate 47) for further examples of effigies from Mid-Ouachita Focus.
GENERAL NOTES

Like the effigy bowls and other effigy vessels of Fulton Aspect (Plates 22, 23), the principal of a rattle made of pottery is also very widespread, occurring in nearly every focus of this Aspect. Four knobs protrude from the sides of small bowls, either of simple hemispherical shape (F) or with convex sides, the mouth being smaller than the body diameter (A-D). These knobs are hollow and each contains one or more small pebbles, producing a harsh rattling noise when shaken. In the Texarkana and Belcher Foci some of these bowls have four long legs which rest on a ring or hollow square of clay (A, C). The bowls themselves are entirely covered with pinched-up ridges of clay (F), tiny nodes stuck on the surface (B, D), applique fillets (C), or grooves made in the plastic clay (A); whatever the body decoration, it commonly covers the four knobs as well.

Apparently wherever rattle bowls occur, similar or identical vessels are found which have the pinches, nodes, or even the four legs, but no rattles (E, G-J). In one case, from Texarkana Focus, the nodes are in panels alternated with a herringbone incised design (J).

In several instances, squeezed lumps of a dense greenish clay, or lumps of red ochre, have been found inside rattle bowls and simple noded bowls as well. Probably they served a definite function in ceremonies.

REFERENCES

None.
GLASSELL ENGRAVED

(Plate 25)

PASTE

See description of type Belcher Engraved except that shell temper is very rare in vessels definitely of the Glassell type. Shell temper is abundant in such vessels as D and N but these are from the Keno site in northeastern Louisiana (Moore, 1909) and need not belong in this group.

FORM

Wall thickness: 3 to 5 mm.

Lip: Usually thickened with a strip of clay attached to outer edge, which sometimes splits off (K); otherwise, thin, wedge-like (M).

Base: Convex on bowls, slightly convex to flat on bottles.

Vessel shape and size: Carinated bowls with rim slightly concave and slanted inward; bottles with globular bodies and spouts usually long and swelling near middle, but spouts may also be larger at top than at bottom (C). The bowl (N) is aberrant. Bowls up to 27 cm. across; bottles up to 20 cm. high.

DECORATION

Treatment: Engraving.

Designs: On bowls such as G, H, J-M the pattern is rectilinear and repeated four times. A ticked or spurred line runs horizontally through center of blank space and either ends against an arc placed vertically, or makes a step up or down and runs through another such blank space. On bowls J-M each of the four design units includes five panels, three in upper part and two in lower, or vice versa, each bisected by a spurred line. Arched lines placed back to back vertically provide "dividing elements" between panels and between the four major units of design. Bottles have various combinations of curved lines and circles in which principal diagnostic feature is common use of very narrow "ladders" or parallel lines with closely-spaced cross-lines (A-A', B-B', F, I). Very narrow hatched and cross-hatched bands are also used (C). Red pigment occurs in designs.

CULTURAL AFFILIATIONS

Essentially a Belcher Focus type but also occurs in thicker and less well-made vessels in eastern components of Titus Focus. Possibly survives into Glendora Focus with vessels like D and N but more research required to determine range of shapes, designs, and tempering material.

DISTRIBUTION

Red River valley of northwestern Louisiana, extending westward into Harrison and perhaps other counties in northeast Texas, and southwestern corner of Arkansas.

ESTIMATED AGE

Same as Belcher Engraved.

REFERENCES

Webb and Dodd, 1941, p. 91 and Plate 15, No. 4, considered this to be "subtype C" of the type Belcher Engraved; Webb and Krieger now consider it distinct.
HALEY ENGRAVED
(Plate 26, A-G)

PASTE
Temper: Fine clay-grit, small amount of fine sand, or none.
Texture: Fine, compact.
Color: Shades of brown and gray-brown from medium to nearly black; cores as dark as or darker than surface.
Surface finish: Well smoothed to highly polished; bottles unsmoothed inside.

FORM
Wall thickness: 3 to 5 mm.
Lip: Rounded or flat and flush with rim.
Base: Flat to slightly convex, same thickness as side wall.
Vessel shape and size: Bottles predominate; bodies small, necks cylindrical (A, E) or slightly tapered toward mouth (B, C, F). One example of vessel with small body and large cylindrical neck, two vertically-perforated lugs on rim (G). Also large, high compound bowls (inturned shoulder area and outflaring rim) with two broad handles.

DECORATION
Treatment: Engraving.
Designs: Gracefully arranged scrolls, doubled-back meanders, or vertical panels, consisting of very fine lines in parallel sets (A-C, F, G), or more open work with individual lines and tightly packed sets which appear almost like excising (D, E). Slanting ticks and spurs appear commonly in opposed pairs (on different lines, running close together), either as the principal element in the scroll (D) or as a bordering element in any of several ways; ticks also occur along single lines as bordering elements (G). Design units repeated two, three, or four times. Red and white pigments occur in lines.

CULTURAL AFFILIATIONS
A Haley Focus type, occurring in other units only as trade ware. Reported from "Late Component" at Spiro Site, Oklahoma (Orr, 1946, Fig. 32, C) and Sanders Site, Lamar County (Krieger, 1946, Fig. 15).

DISTRIBUTION
Adjacent corners of Texas, Louisiana, Arkansas, and Oklahoma.

ESTIMATED AGE
Some part of span 800-1200 A.D.

REFERENCES
Type name decided by Shreveport Conference, 1950.

HANDY ENGRAVED
(Plate 26, H-M)

All data the same as for Haley Engraved, except as follows:
Vessel shape and size: Bottles uncommon (L); carinated bowls with flanged rims (I'-I); low, squat compound bowls with two wide strap handles (K-K'); carinated bowls with high rim (J); jars with outflaring rims (H); vessel (M) similar to (G).
Decoration Treatment: Engraving, punctating.
Designs: Scrolls of widely spaced lines, running horizontally (H, J) or slanting (I, K); vertical panels (L); concentric circles (M). Distinguished from Haley Engraved by use of row of punctates between two parallel lines as dominant design element. Units repeated four times; no pigments.

REFERENCES
Type name decided by Shreveport Conference, 1950.
PASTE
Temper: Clay-grit.
Texture: Usually coarse, somewhat crumbly; occasionally finer and firmer.
Color: Shades of brown and gray-brown from light to dark; cores darker than surfaces.
Surface finish: Entirely covered with decoration.

FORM
Wall thickness: 4 to 9 mm.
Lip: Rounded, turned outward slightly.
Base: Flat disk to which body wall was attached.
Vessel shape and size: Consists entirely of small jars, about 10 to 25 cm. high; some rims outflaring (D, E, G, I); others high and more or less cylindrical with two very wide strap handles (A, B, C, F, H). Rims raised into four prominent peaks fairly common, either with or without strap handles.

DECORATION
Treatment: Applique, incising, punctating.
Designs: Concentric circles, scrolls, and parallel diagonal lines set in a wide variety of arrangements. Small areas flanking main design units may be filled with stick punctates or parallel lines, or both (B, C, E, H, I); or sets of fine diagonal or spiral lines may be alternated with single rows of fingernail punctates (A, D). Some vessels have applique fillets running vertically, diagonally, or both (A-D, F, G), the fillets usually being notched or punctated along the top. Strap handles are covered with same decoration as on body. Some jars with high rims have horizontal row of punctates about midway, rising into punctate-filled triangles below the four rim peaks (B, C). Lips are often notched along outer edge (B-E, G, I).

CULTURAL AFFILIATIONS
A Haley Focus type. Its closest relative is Pease Brushed-Incised of Bossier Focus (Plate 53), which employs the same techniques, covering the whole vessel body and rim, but is simpler, lacks handles, and is believed to have been a somewhat later type. When single rows of fingernail or stick punctates are found between incised lines, this type resembles Handy Engraved in design conception (Plate 26, H-M).

DISTRIBUTION
Adjoining corners of Texas, Arkansas, and Louisiana, centered around great bend of Red River.

ESTIMATED AGE
Some part of span 800-1200 A.D.

REFERENCES
Krieger, 1946, Fig. 19; Newell and Krieger, 1949, pp. 202-204. Examples may be seen in Moore, 1912, Plate XXXIX and Figs. 42, 43, 49, 53-57; Harrington, 1920, Plates XLVII, A; LXII, A, B; LXIII, B.
HARLETON APPLIQUED
(Plate 28)

PASTE
Temper: Clay-grit; occasionally white particles, either bone or kaolin.
Texture: Compact, fairly coarse.
Color: Surface cream, buff, shades of gray and brown. Considerable fire-mottling with spots dark gray to black.
Cores gray to black.
Surface finish: Interiors poorly smoothed; exteriors same except where fillets applied.

FORM
Wall thickness: 4 to 9 mm.
Lip: Rounded, turned outward.
Base: Usually a thick, flat, round disk to which wall attached; sometimes convex or slightly flattened and no thicker than wall.
Vessel shape and size: Jars only, usually small, 10 to 15 cm. high, but some 25 cm. or more. Rims high in relation to body, curve outward so mouth diameter usually at least as great as that of body and sometimes slightly greater. Rim may meet body at definite angle (D, H) but usually merges with it gradually. Pulling of rim into four raised peaks is common; when strap handles are present there are two attached to opposite rim peaks (B); when lugs are present there are four, one at each rim peak (A, G).

DECORATION
Treatment: Applique, incising, brushing, punctating.
Designs: Scrolls, chevrons, panels of vertical lines, concentric diamonds, etc., formed with appliqued fillets on body; may cover whole body or upper part. Design unit always repeated four times and aligned under rim peaks if present. Fillets often punctated (A, B, E, F). Rims plain (C, D), punctated in more or less regular rows (E, G), incised with vertical lines (A, B), or brushed horizontally (H). Spaces between fillets occasionally brushed (H). Applique knob may appear in center of design units (E, E). Handles and lugs may be molded into ridged ornamental patterns.

CULTURAL AFFILIATIONS
Titus Focus exclusively, an elaboration of technique of applique which is paralleled only in type Cass Appliqued (Plate 11).

DISTRIBUTION
Principally in drainage areas of Sulphur River, Big Cypress and Little Cypress Creeks, and vicinity of Caddo Lake.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
Krieger, 1946, Figure 18.
HATCHEL ENGRAVED
(Plate 29)

PASTE
See type description for Barkman Engraved.

FORM
Wall thickness: Range 4 to 6 mm., average 5 mm.
Lip: Thin, rounded, may be turned outward slightly.
Base: Some bottoms convex and not distinguishable from side wall; others slightly convex or flat but of same thickness as side wall.
Vessel shape and size: Small bottles as shown, height 12 to 25 cm., neck vertical or tapered inward slightly, then expanding again at mouth. Some have angular shoulder near bottom. Other vessel forms may be added to type with further study.

DECORATION
Treatment: Engraving and applique.
Designs: Body divided into oval or elliptical panels, almost always four in number. Each panel half usually contains a set of parallel arcs curved in same direction as sides of panel, or in opposite direction. Vertical lines separate panels. Rows of small applique nodes or low fillets sometimes extend part way down body from base of spout; these are polished like the vessel surface and are difficult to see (A, B, I). The nodes may be just above the center of each panel or on the lines separating the panels. In one case (F) there are two such rows in the center of each panel. Two or three horizontal lines form an upper margin to the design but the bottom is usually left open. If the body is globular the design covers all but the base; where an angular shoulder is present the design extends only as far downward as the shoulder (A, G, I). Red ochre pigment common in engraved lines; white pigment occasionally seen.

CULTURAL AFFILIATIONS
Like Barkman Engraved, this type belongs exclusively to Texarkana Focus. The relationships in this case, however, are more with the type Friendship Engraved (Plate 21) of Mid-Ouachita Focus in Arkansas, which includes bottles with similar small nodes and ridges just below spout and designs of arched lines in some cases.

DISTRIBUTION
Apparently confined to same small area as Barkman Engraved.

ESTIMATED AGE
1200-1600 A. D. or part thereof.

REFERENCES
None.
HEMPSTEAD ENGRAVED
(Plate 30)

PASTE
Temper: Fine clay-grit, finely pulverized shell, or small amount of sand.
Texture: Fine, compact, somewhat harder than most Caddoan pottery.
Color: Light yellowish brown to dark brown and gray. Cores the same.
Surface finish: Fair to good polish.

FORM
Wall thickness: 3 to 5 mm.
Lip: Rounded and flush with rim or turned outward slightly.
Base: Convex on bowls, more flattened on bottles.
Vessel shape and size: Small carinated bowls with wide shallow bottoms, rims vertical and straight, concave, or convex (B-D, I). At least one large carinated bowl (J) with deeper bottom and diameter as much as 31 cm. Hemispherical bowl (H) is one of an attached pair (note exposed break on left side). Bottles.

DECORATION
Treatment: Engraving.
Designs: Principally pairs of hatched or cross-hatched triangles placed around rim of bowls (B, C, I, J) and around body of bottles (A). One to three horizontal borderlines above triangles and at least one below. Sketches E, F, G show additional samples. A series of small right triangles appears on D, and of pendant triangles on H. Red pigment in lines.

CULTURAL AFFILIATIONS
Texarkana and Mid-Ouachita Foci. As in type Bowie Engraved (Plate 8) this type shows rejection of common practice of repeating designs four times and use instead of large number of small identical units.

DISTRIBUTION
Found rather commonly in Southwest Arkansas and extends into Texas only in Bowie County in northeast corner, so far as known.

ESTIMATED AGE
1200–1500 A.D. or part thereof.

REFERENCES
None. Specimens may be recognized in Harrington, 1920, Pls. 25, B; 26, B; 36, B; 40, A; 58, B.
HICKORY FINE ENGRAVED
(Plate 31)

PASTE
Temper: Fine clay-grit, small amount of sand, or none.
Texture: Fine, compact; sometimes rather coarse, lumpy.
Color: Shades of gray and gray-brown from light to dark; sometimes reddish-brown. Cores gray, brown, black.
Surface finish: Fair to good polish except bottle interiors un-smoothed.

FORM
Wall thickness: 3 to 7 mm., average about 4 mm.
Lip: Rounded, flush with rim.
Base: Usually convex; may be somewhat flat but no thicker than side walls.
Vessel shape and size: Primarily bottles with spout cylindrical (A, E) to definitely tapered (C, D, I). Four-lobed body in at least one case (A) and two-chambered in another (H). Also simple bowls (G) and bowl with swollen midsection (J). At Davis site, Cherokee County, carinated bowl form common, with broad convex bottoms and rims vertical or slanted outward. Other shapes may be added.

DECORATION
Treatment: Engraving.
Designs: Primarily a few horizontal lines; bottles have from four to eight encircling top of body, with spouts either plain or with three or four lines encircling top of spout; bowls have from three to eight lines around top of rim. Bottom line may be heavier than others (I, J) or ticked (E). At Davis site carinated bowls with grid of crossed diagonal lines around rim were tentatively included in type (Newell and Krieger, 1949, Fig. 33, B, C). Red pigment commonly occurs in lines.

CULTURAL AFFILIATIONS
Well established type in Alto, Gahagan, Haley, and Spiro Foci of Gibson Aspect. Area of greatest frequency remains to be determined. Closely related to Holly Fine Engraved (Plates 34, 35) of Alto and Gahagan Foci on the one hand, and to Spiro Engraved (Plate 64) on the other; i.e., it occurs in association with both these types but was spread over a larger area than either of them. The encircling horizontal lines of Hickory are like those found above the body designs of both Holly and Spiro Engraved. Specimens shown in Plate 31 are all from Haley Focus components in southwest corner of Arkansas and cannot be distinguished from those of Alto, Haley, and Spiro Foci (except that B and J are from the two known Spiro Focus components in northeast Texas, in Franklin and Red River Counties, respectively).

DISTRIBUTION
Almost as extensive as whole Caddoan archeological area in adjoining sections of Oklahoma, Texas, Arkansas, and Louisiana.

ESTIMATED AGE
Entire span of Gibson Aspect, some part of 500-1000 A.D.

REFERENCES
Krieger, 1946, Figure 19; Newell and Krieger, 1949, pp. 90-91, Figures 33, 44.
PASTE
Temper: Usually none; sometimes fine clay-grit or small amount of sand.
Texture: Fine, compact.
Color: Shades of brown, gray, gray-brown, and reddish brown from light to dark and nearly black. Best vessels uniformly dark but fire-mottling sometimes has pleasing effect (Plates 32, F, H, N; 33, E, N). Soft red film, probably applied after firing, occurs occasionally on Texas specimens (Plate 33, A, L) but unknown so far in other states. Cores lighter than surface and contrast strongly with it on darker vessels.
Surface finish: Fair to good polish.

FORM
Wall thickness: 2 to 5 mm.
Lip: Rounded and turned outward; occasionally flush with rim.
Base: Usually convex; occasionally flat on both bowls and bottles but no thicker than side walls.
Vessel shape and size: Bottles with spool-shaped spouts, both long and short (Plates 32, A, C, D, L, N; 33, I, J, M–M', O); tripod bottles with legs hollow and expanded at feet (Plate 32, B) or long and tapered (Plate 33, F); effigy bottle with spout off-center and side molded into human face (Plate 32, G); bottles with lower and upper chambers (Plates 32, M; 33, K); olla-like vessels with globular to drop-shaped bodies and small mouths with low necks (Plates 32, E, H; 33, N); simple globular bowls with two vertically-perforated lugs just below lip (Plate 32, F); simple conical bowls (Plate 32, O); carinated bowls with rim slanted inward (Plates 32, I, J; 33, B, D, G, H); small bowl with rim curved sharply outward (Plate 32, K); globular bowl with short rim rising vertically, then curved outward, and four small suspension holes on opposite sides (Plate 33, A); vase-like vessels with small globular bodies and rim either cylindrical (Plate 33, E) or gently curving outward (Plate 33, C); deep bowls with rim gently curving outward (Plate 33, L).

DECORATION
Treatment: Engraving, punctating.
Designs: Featured principally by negative meandering scrolls which double back sharply. The place of doubling back may be pinched to a narrow neck from which the scroll swells on either side (Plates 32, A; 33, C, L). The scroll band may or may not have a ticked line in its center; the flanks are formed by cross-hatching and blank disks of various sizes are left within the cross-hatched areas. Large circles may be used within which is a core filled with fine punctates made through polished surface; a ticked ring or band may lie between the punctated core and outer circle.
Single scroll arms may be used without a continuous meander around vessel (Plates 32, G, I, O; 33, F, I). Cross-hatched bands may be used as scrolls themselves, with the spaces between them blank (Plate 32, D, F). Bottle and jar bodies provide the largest space and therefore the freest designs. On carinated bowl rims the same doubled-back scrolls are squeezed into narrow horizontal zones, but with pleasing effect. Designs are almost always repeated four times, the exceptions being tripod bottles and effigies. Some carinated bowl rims appear to bear eight slanting scrolls but these are really four, each double. Both red and white pigments appear in lines, but cores contrast without this.

CULTURAL AFFILIATIONS

Principally a Mid-Ouachita Focus type but also well established in Belcher and Texarkana Foci, and occurs occasionally in Titus Focus either as resident or trade ware. Probably the handsomest of all Caddoan pottery, some vessels being among the most striking achievements of any American Indian potters. Plates 32, 33 show range of form and workmanship rather than finest pieces; those in Plate 32 from Arkansas, in Plate 33 from Louisiana and Texas. Some differences in vessel form apparent in these states but scroll motif follows same essential principals; red film known so far only in Texas (Plate 33, A, L). Means Engraved of Mid-Ouachita Focus is closely related type (Plate 47) and some vessels may be difficult to classify in one type or the other (e. g., Plate 32, D); however, Means not known as resident type outside of Arkansas. Hodges may at times also be confused with Natchitoches Engraved of historic Glendora Focus and the doubled-back scrolls may occasionally be identical (Plate 51, A-C). The scrolls of Natchitoches are generally more complex, their flanks being filled with smaller scrolls; vessel forms are distinct on the whole, running more to carinated bowls with flaring rims; and shell temper is common in it while absent in Hodges. The scrolls of Ripley Engraved of Titus Focus ( Plates 57-59) are also similar but simpler and cruder and vessel forms again differ. Both Hodges and Ripley may be regarded as ancestors of historic Natchitoches Engraved. The forked-eye symbol (Plate 32, G) is a lingering element of “Southern Cult” ceremonialism.

DISTRIBUTION

Southwest Arkansas, northwest corner of Louisiana, and northeast Texas as far west as Upshur County. Not definitely reported from Oklahoma.

ESTIMATED AGE

1200-1500 A. D. Perhaps continuous development into Natchitoches Engraved type at about 1600 A. D.

REFERENCES

None. Type name agreed upon at Shreveport conference, 1950.
PASTE

Temper: Clay-grit, sometimes with added particles of carbonized material or bone, sometimes with no visible temper or a little fine sand.

Texture: Usually fine but ranges to fairly coarse and somewhat lumpy.

Color: Usually rich dark brown, reddish brown, and gray-brown, ranging to black. Occasionally pale gray or even cream. Cores dark gray or brown, occasionally with reddish or greenish tinges.

Surface finish: From well smoothed to fair polish except that interiors of bottles unsmoothed.

FORM

Wall thickness: Extreme range 3 to 9 mm., most specimens 4 or 5 mm.

Lip: Usually rounded and flush with rim, but greatly widened and flat lips occur on carinated and simple bowls (Plate 34, B, E, I); thick, cambered lips (two convex surfaces meeting in a sharp ridge) occur on a few bowls, and some carinated bowls have scalloped flange bent outward at right angle to rim (Plate 34, G). Diagonal grooves across thickened lip and into interior of vessel give rope-like effect (Plate 34, C, D).

Base: Convex on bowls and most bottles; flat on some bottles and upright vessels (Plate 35, E, F). Always of same thickness as side walls.

Vessel shape and size: Carinated bowls most common, diameter 15 to 40 cm. or more (Plates 34, A, C, E, G; 35, A, B). Bottles also common, body being small and globular or rounded on upper part and sides straight on lower part (Plate 35, E, G); spouts probably always well tapered. Bottle bodies may meet spout at sharp angle or merge gently in long curve (not illustrated). Sherds show other bottles with horizontal ledge around base of spout, 2 or 3 cm. wide. Simple bowls up to 40 cm. in diameter (Plate 34, D, I); small jars with vertical rim (Plate 34, F); deep bowls with more or less vertical rim (Plates 34, B; 35, C); and peculiar flat bowl with small mouth (Plate 35, D) constitute other forms.

DECORATION

Treatment: Very finely engraved lines set close together; excising; lip notching.

Designs: Bowls and jars usually have design confined to rim or narrow zone near top equivalent to rim, consisting of fine engraved lines in sets running alternately vertically and diagonally—i.e., parallel with one another and with one side and hypotenuse, respectively, of right triangles formed by excising, as shown clearly by specimens in Plate 34. A few variations may be seen, such as concentric quarter-circles in place of diagonals, a small pit being ex-
cised at their center (Plate 34, F, H); or sets of straight lines in three directions, parallel to all three sides of small excised triangles (Plate 34, D). Inclined scrolls with excised cores and longitudinal bisecting lines, similar to those of Crockett Curvilinear Incised (Plates 14-16) except for the technique, are tentatively included in Holly type (Plate 35, D). Bottles have a few encircling lines at top of spout, the lowest line often deeper than others, and other such lines at top of body; remainder of body covered with very fine lines in full concentric circles or spirals, and areas between these filled with parallel straight lines running at different angles. The cores of these sets of circles are excised, as are the corners of squares made around the outermost circles. Bowl lips greatly widened and flat have zigzags and meanders along top of lip, formed by excising. Main design units repeated four times on bottles and cups (Plate 35, E-G), but on bowls any number used that fits space, from five or six to 15 or more. Red pigment common in lines and excised areas; no other colors noted.

CULTURAL AFFILIATIONS

A common Alto Focus type, also occurring in small numbers in Gahagan Focus, both of Gibson Aspect. Designs closely resemble those of Spiro Focus in eastern Oklahoma, but Holly lines closer together, designs generally lack punctated circles in center of design units and spiral common in Spiro type, and the vessel forms (except for bottles with tapered spout) are quite distinct in the two types (see Newell and Krieger, 1949, pp. 200-201 for discussion). In intermediate area, as around great bend of Red River, it is sometimes difficult to classify vessels as Holly or Spiro Fine Engraved, particularly bottles. Plate 35, A-F, are from Crenshaw mound excavations of Judge Harry J. Lemley and belong to a component which is primarily Alto Focus; the small bowl with three molded animal heads on rim (C) is only instance of effigy work known in Holly type or in whole Alto Focus complex, and probably is due to an outside influence. Plate 35, G is from C. B. Moore's excavations at Gahagan mound, on Red River in Louisiana (Moore, 1912) and illustrates typical bottle form and decoration in this type. All specimens in Plate 34 from Alto mound site in Cherokee County, Texas; further illustrations and variations occur in Newell and Krieger, 1949.

DISTRIBUTION

Central part of East Texas is area of concentration, but examples found westward to Chupek site on Brazos River in central Texas, in northwest Louisiana, and northward to Red River valley in Texas and southwest Arkansas. May occur more widely as trade ware.

ESTIMATED AGE

Some part of span 500-1000 A.D.

REFERENCES

Krieger, 1946, Figure 19; Newell and Krieger, 1949, pp. 81-90, Figures 29-32.
PASTE
Temper: Finely pulverized shell, small amount of sand, or none.
Texture: Fine. Full of tiny cavities where shell leached out.
Color: Cream, various shades of gray, gray-brown, reddish-brown from light to dark. Cores lighter than or about same as surface.
Surface finish: Smoothed to poor polish; occasionally well polished.

FORM
Wall thickness: 2 to 5 mm.
Lip: Rounded and turned sharply outward.
Base: Convex or nearly flat; "extended base" fairly common.
Vessel shape and size: Principally bottles in wide variety of shapes from globular to squat. Spouts usually spool-shaped but may be very high like A. Olla-like vessels with small mouths may have plain convex base (E) or "extended base" (G, I). Vessel forms like A, F-I are peculiar in Caddoan archaeology and B-D included only tentatively on basis of design. Range of forms to be revised with further study.

DECORATION
Treatment: Engraving, small amount of incising and punctuating.
Designs: Primarily narrow cross-hatched bands in curvilinear patterns. The hatching is exceedingly fine in some cases (A, E, F, H) and may be supplemented by rows of fine punctates as borderlines (E, H). Vessels B-D have scroll bands which appear to have been incised before firing, then whole vessel polished afterward. Major units usually repeated four times. Red pigment may occur in lines.

CULTURAL AFFILIATIONS
Most specimens come from historic sites (A, E, F-J) and probably belong to Glendora Focus. Others from prehistoric sites (D) or association unknown (B, C). The type is tentative and established so far mainly as a counterpart of Maddox Engraved of Bossier Focus (Plate 44). The content of the latter has been considerably confused and it is now considered to be entirely non-shell-tempered, definitely pre-European in age, and probably belonging to an early phase of Fulton Aspect. While the finely cross-hatched bands of Hudson Engraved are much like those of Maddox, the former is easily distinguished by its shell temper and different range of shapes, and it is later in time. Vessel D has four scroll arms descending from base of neck, alternating with four areas bending upward which resemble bird heads, with blank disk in body and another in position of eye. This conventionalized bird is very similar to the common bird on Marksville pottery but a direct relationship appears impossible; the vessel is heavily shell-tempered and the shape completely un-Marksvillian.

DISTRIBUTION
Mainly northeastern Louisiana and lower Arkansas River valley, so far as known from illustrations of C. B. Moore (1908, 1909). Specimens A-C from Red River and Upshur Counties, northeast Texas and may be trade pieces of Hudson or some other type not yet recognized.

ESTIMATED AGE
1500-1800 A. D. or part thereof.

REFERENCES
None.
HUME ENGRAVED
(Plate 37)

PASTE
Temper: Fine clay-grit, sand, or both sand and clay-grit.
Texture: Compact, hard, does not break easily; surface may feel slightly sandy.
Color: Cream and pale buff. Abundant fire-mottling produced spots from light to dark gray. Cores same as surface.
Surface finish: Poorly smoothed; bottles not smoothed at all on inside.

FORM
Wall thickness: 4 to 8 mm.
Lip: Rounded, not turned outward.
Base: Flat to slightly convex on bottles; convex on bowl (F).
Vessel shape and size: Primarily bottles with elongate bodies and short necks; necks usually distinct from bodies (A-D) but sometimes merge gently (E). A raised flange may occur around base of neck (A). One bowl known, has four tabs with twin lobes rising from lip (F). Bottles may be quite large, up to 30 cm. high.

DECORATION
Treatment: Engraving.
Designs: Bands widely spaced around body and placed vertically, filled with crossing lines (E), cross-hatch (A, C, D, F), or hachure (B). On bottles, design usually consists of three such bands (A-D). The bowl (F) has six wide bands alternated with five narrow ones. Small triangles may be pendant from the bottle necks (B, C). Both white and red pigments occur in lines.

CULTURAL AFFILIATIONS
Complete specimens from components of historic Allen Focus. Possibly present in prehistoric Frankston Focus, as shown by sherds.

DISTRIBUTION
Small area, so far as known, in northwestern Cherokee County and adjacent sections of Anderson and Henderson Counties, in upper Neches River valley.

ESTIMATED AGE
1600-1750 A. D. May have existed prior to 1600.

REFERENCES
None.
KARNACK BRUSHED-INCISED
(Plate 38)

PASTE
Temper: Clay-grit; occasionally pulverized bone.
Texture: Fine to coarse.
Color: Surfaces cream to shades of gray and brown to nearly black. Much fire-mottling. Cores like surface or darker.
Surface finish: Interiors poorly smoothed; exteriors roughened by decoration.

FORM
Wall thickness: 4 to 7 mm.
Lip: Rounded, turned outward.
Base: Convex or small flat area; vessels do not stand up well.
Vessel shape and size: Bodies barrel-shaped, rims low and turned outward sharply (A-C, E) or somewhat higher and turned outward less sharply (D, F).

DECORATION
Treatment: Incising, brushing.
Designs: Incised lines (made individually) or brushed marks (made with grass?) run vertically or nearly so over whole body. Rim exterior has incised lines running vertically (B, D) or diagonally (A, E), or brushed lines (F) horizontally all the way around. Plain rim (C) unusual.

CULTURAL AFFILIATIONS
Titus Focus, especially components with mixed Titus and Belcher Focus pottery, but only one vessel (C) from Belcher site. Closely related to Belcher Ridged (Plate 6) in vessel form; decoration probably imitation of peculiar ridging technique in latter. Webb (1948) includes such vessels in type Maddox Brushed and compares the brushed lines in irregular, vertical, horizontal, or herringbone patterns, and appliqued nodes and ridges, between Maddox and Pease Brushed-Incised. It is suggested that such vessels in the Maddox type should simply be included in the Pease type (Plate 53) and that vessels like those illustrated in Plate 38 should be assigned to Karnack Brushed-Incised. These vessels are not merely variations of Belcher Ridged, for where they occur, the distinctive ridging of the latter is very rare, and vice versa. Belcher Ridged furthermore occurs in both Belcher and the earlier Bossier Focus, while Karnack appears to be confined to the Titus Focus period, contemporary with Belcher Focus; workmanship is much cruder and rims show more variety than those of Belcher-Ridged. Webb further notes the peculiar use of brushing in the much earlier Tchefuncte complex of Louisiana, its absence in Marksville, Troyville, and Coles Creek, and its "reappearance" in Bossier Focus, various foci of Fulton Aspect, and Plaquemine in central Louisiana.

DISTRIBUTION
Vicinity of Caddo Lake in Harrison and Marion Counties, Texas; along Texas-Louisiana border.

ESTIMATED AGE
1200-1500 A.D. or part thereof.

REFERENCES
None.
KENO TRAILED
(Plate 39)

PASTE
Temper: Finely pulverized shell, fine sand; or none visible.
Texture: Fine, very compact.
Color: Principally shades of gray from medium to dark; also shades of gray-brown. Cores the same or lighter.
Surface finish: Exteriors smoothed to polished, over decoration as well. Interiors of bottles (nearly the only form) not smoothed.

FORM
Wall thickness: 2 to 4 mm.
Lip: Rounded, turned outward; may be flush on bowls.
Vessel shape and size: Primarily bottles, many quite large with bodies up to 25 cm. in diameter and short necks or spouts. Spouts usually spool-shaped, swollen in middle, but may be cylindrical with lip turned sharply outward (L, J). Globular bowl with two opposed lugs (F) is only other form recognized so far.

DECORATION
Treatment: Trailing (incising broad lines with blunt instrument), supplemented by a little engraving and applique.
Designs: Endless combinations of straight and curved parallel lines fitted close together to cover nearly entire body. Motifs include scrolls, simple or doubled back on one another, spirals, guilloches, meanders, concentric circles, and arcs fitted into areas between major units. Effigy faces created with small applique nodes (K). Major units usually repeated either two or four times.

CULTURAL AFFILIATIONS
Occurs in four loci: Historic Glendora; prehistoric Mid-Ouachita, Texarkana, and Titus, being the least frequent in Titus. A distinct division noted in width of lines, the narrowest and finest coming from northeast Louisiana (A-E). Those from Greer site in eastern Arkansas have broader lines and somewhat simpler designs (F-I), which is also true of those from southwest Arkansas (J-L) and northeast Texas (M). Shell temper occurs in some specimens from historic as well as prehistoric sites in both northern Louisiana and southern Arkansas; farther west, shell temper is absent. Apparently the type flourished both before and after the earliest European contacts but it needs to be analyzed more in specific associations. The trailing technique seems to be related to that in type Foster Trailed-Incised (Plate 20) of the prehistoric Belcher and Texarkana Foci.

DISTRIBUTION
Across northern Louisiana to lower Ouachita River (Glendora and Keno sites; Moore, 1909); across southern Arkansas to lower Arkansas River (Douglas and Greer sites; Moore, 1908); and westward into northeast Texas as far as Hopkins County.

ESTIMATED AGE
1400-1700 A. D. or later.

REFERENCES
Webb, 1945, pp. 64-67 and Plate 11, Nos. 2, 4. Krieger, 1946, Figure 18.
KIAM INCISED  
(Plate 40)

PASTE  
Same as Dunkin Incised (Plate 18).

FORM  
Wall thickness: 4 to 10 mm., average 6 or 7 mm.  
Lip: Rounded, flush with rim.  
Base: Flat disk to which body wall attached.  
Vessel shape and size: Primarily jars with rims vertical to everted (A, B, D, E), from only about 10 cm. high to as much 50 cm. or more; the latter are fairly numerous and may be regarded as storage jars. Probably some cylindrical vessels and similar ones with rims gently outcurved (C) should be included, although these would be distinguished from Dunkin Incised only on the basis of designs.

DECORATION  
Treatment: Incising; fingernail punctating; rarely stick-punctating.  
Designs: Horizontal lines encircle the rim area of all vessels; rather crudely done, lines do not “overhang”. Bodies occasionally plain but usually have either vertical incised lines closely spaced as on the rims (A, D), or fingernail punctations more or less arranged in horizontal rows (C, E). Rarely, stick punctates cover the body (B), some of which are angular as though done with the corner of a square implement. Appendages absent.

CULTURAL AFFILIATIONS  
An Alto Focus type which may also belong to Bossier and Haley Foci. It appears to be one of the few specific types which survives from the Gibson Aspect into Fulton Aspect. Very similar to type Hardy Incised of central Louisiana, differing mainly in coarser paste and greater use of body punctating, also jars rather than barrel-shaped vessels.

DISTRIBUTION  
Central part of East Texas, also occurring sporadically in northeast part, and at Crenshaw and East mound sites in southwest Arkansas. A close comparison needed to determine its distribution in Louisiana in relation to Hardy Incised, Dunkin Incised, and Coles Creek Incised, all of which may have been mis-identified in some cases in available literature.

ESTIMATED AGE  
Some part of span 500-1000 A. D. but probably farther toward the end of span than most Alto Focus types, and may have continued to 1200 A. D. or so.

REFERENCES  
Newell and Krieger, 1949, pp. 110-116, Figs. 42 B, F; 43, A-E, included this material in type Dunkin Incised, but it is here separated again as in Newell’s original analysis; he distinguished between the pottery with sets of parallel lines in both diagonal and horizontal arrangements (Dunkin Incised) and those with only horizontal lines on rims and vertical lines or punctates on bodies (Kiam Incised). Krieger, 1946, Fig. 19 referred to the latter as “Hardy Incised” but this was withdrawn in 1949.
KILLOUGH PINCHED
(Plate 41)

PASTE
Temper: Clay-grit; occasionally pulverized bone or potsherds.
Texture: Coarse but not crumbly.
Color: Surfaces cream, buff, shades of brown and gray-brown.
Cores somewhat darker than surface. Some fire-mottling.
Surface finish: Interiors poorly smoothed; exteriors completely pinched.

FORM
Wall thickness: 5 to 8 mm.
Lip: Rounded to slightly flattened; flush or turned outward slightly.
Base: Round, flat disk or slightly convex and only slightly thicker than sides.
Vessel shape and size: Principally small jars with rim vertical to everted, and set at slight angle to body or merged gently with it. Several of these have four legs resting on a ring base and two opposed strap handles (A–C); others have two strap handles or solid lugs (H, J). Simple bowls usually have four hollow knobs attached to side, in which are pebbles which rattle. More elongate jars occur without appendages (F, G), and bottles are known but rare (I).

DECORATION
Treatment: Pinching and fingernail impressions placed end-to-end.
Designs: Spirals and concentric circles in sets repeated four times (A–C, G, H, J); nodes pinched up at random (D, E); and pinched ridges running vertically on body (F, I). Vertical or horizontal ridges appear on rims, legs, and handles no matter what the body designs are. Entire exterior surface commonly covered except for bottle necks.

CULTURAL AFFILIATIONS
Primarily a Frankston Focus type but appears occasionally in Titus Focus components. One example (I) appears in historic Allen Focus, but this bottle is not characteristic of the type either.

DISTRIBUTION
Principally in drainage areas of Neches and upper Sabine Rivers, but a few specimens as far east as Morris County. Apparently not traded much to tribes west of the Caddoan region, as compared with other Frankston Focus types.

ESTIMATED AGE
1200–1500 A.D., with survival as late as 1700 A.D. possible.

REFERENCES
Jackson, 1936, Plate 25, Figure 4; Krieger, 1946, Figure 18.
LA RUE NECK BANDED  
(Plate 42)

PASTE
Temper: Clay-grit; occasionally pulverized bone or potsherds.
Texture: Coarse but not crumbly.
Color: Surface varies from cream to light yellowish brown and medium brown. Considerable fire-mottling. Cores brown or gray.
Surface finish: Interiors poorly smoothed; exteriors same or roughened by brushing.

FORM
Wall thickness: 4 to 9 mm.
Lip: Rounded, bent outward.
Base: Round, thick, flat disk to which body wall is attached.
Vessel shape and size: Jars with prominent rims usually meeting body at a slight angle, mouth at least as wide as body and often wider (A, C-F). More globular body with smaller mouth (B) unusual. Height usually 15 to 30 cm., but some vessels have capacity of several gallons, height of 40 cm. or more and correspondingly wide mouths (E). Largest vessels perhaps for storage rather than cooking.

DECORATION
Treatment: Neck banding (crimping of neck coils), brushing, applique.
Designs: Each coil added to neck or rim of vessel was pinched on to preceding coil at fairly regular intervals and the resulting crimps not smoothed over. Such coils vary from four to eight in number. Bodies plain (E, F), brushed vertically (A, C, D), or plain with appliqued fillets in simple arrangements (B).

CULTURAL AFFILIATIONS
Frankston and Titus Foci. Very similar to type Duren Neck Banded of Alto Focus (not illustrated) but latter never has brushing or applique work, the bodies being plain or covered with fingernail punctations. La Rue is also related to Nash Neck Banded of Texarkana and McCurtain Foci (Plate 50), but the neck crimping is much cruder, the vessels much larger on the average, and shell tempering is unknown in it. The three types provide a special development within the Caddoan archaeological region, for which an influence from the Puebloan culture of the Southwest has been postulated (Krieger, 1946, pp. 237-241). In the Caddoan area, crimping of coils is always confined to the vessel rim.

DISTRIBUTION
Found in drainage systems of Neches, Angelina, Sabine, and Sulphur Rivers. Trade pieces occur westward into central Texas, as in the case with other Frankston Focus types. One complete vessel (C) comes from Coleman County in the upper Colorado River drainage.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
Krieger, 1946, pp. 206, 238, Plates 33, 34, Figure 18. The type “Leesburg Neck Banded” on Figure 18 has been abandoned and the specimens now are regarded as either Nash Neck Banded or La Rue Neck Banded.
PASTE
Temper: Clay-grit; rarely, pulverized shell (specimen J). Pulverized bone particles appear occasionally as additions to clay-grit.
Texture: Granular, small to medium-sized particles; harder than most pottery in Caddoan area (about 3.0). Sherds do not crumble.
Color: Shades of light, medium, and dark brown, and grayish browns. Core and surface colors frequently same or core slightly darker.
Surface finish: Interiors smoothed; body exteriors usually poorly smoothed but occasionally brought to polish; rim exteriors purposely roughened.

FORM
Wall thickness: Range 4 to 12 mm., average 6 to 8 mm.
Lip: Rounded, may be flush or bent outward slightly.
Base: Flat to slightly convex; bumpy; only slightly thicker than side wall, if at all.
Vessel shape and size: Jars only; rim flares outward and may be joined to body at rather sharp angle (C, E, F, J), or very gently merged with it (A, B, D). Mouth diameter usually at least as great as that of body, often greater. Size ranges from very small, almost miniature vessels (C) to jars at least 30 cm. high (I); sherds indicate still larger vessels and one with a rim over 20 cm. high.

DECORATION
Treatment: Applique, intentional roughening, and (rarely) punctation.
Designs: Quadrature of vessel affected by appliqued nodes on rim, fillets on body, or by fillets on both rim and body (A, B, F, H, I). Occasionally lip lifted into four peaks (B). A row of diagonal punctates or slashes may appear at base of rim (J). Rims almost always roughened and bumpy and contrast with bodies when latter are smoothed. Bodies occasionally roughened also, having scoured or faintly brushed appearance (I) although never as complete or regular as on vessels classified as "brushed".

CULTURAL AFFILIATIONS
A Texarkana Focus type, virtually unknown in other complexes. Might be expected to appear in McCurtain Focus components nearby but has not been reported as a definite trait there.

DISTRIBUTION

ESTIMATED AGE
1200-1500 A. D. Possibly survives to historic horizon at 1650-1700 A. D.

REFERENCE
Krieger, 1946, Figure 18.
PASTE
Temper: Usually clay-grit, rarely pulverized bone.
Texture: Fine to somewhat granular; soft, friable.
Color: Surfaces usually cream to pale brown, but dark brown, reddish brown, dark gray and black also occur. Cores darker than surface.
Surface finish: Both exterior and interior smoothed but rarely polished.

FORM
Wall thickness: About 3 to 6 mm.
Lip: Flat to rounded. In one case (F) thickened and circular in cross-section.
Base: On bowls, convex and not distinct from side wall; on bottles and barrel-shaped vessels, tends to be flatter but still convex.
Vessel shape and size: Small simple bowls, maximum diameter 15 to 23 cm.; small barrel-shaped vessels, greatest diameter below midsection; bottles, with tapered spout in some cases; a human effigy.

DECORATION
Treatment: Engraving only.
Designs: Narrow bands filled with cross-hatching or hachure, usually in gracefully arranged curvilinear patterns, sometimes with "flags" or pendants attached to main lines; also similar bands in horizontal panels or encircling upper part of vessel. Lips may be notched.

CULTURAL AFFILIATIONS
Within the Caddoan area this is primarily a Bossier Focus type although it may also belong to the Frankston and Belcher Foci. In central and eastern Louisiana it may belong to the Plaquemine complex. Concepts as to what constitutes "Maddox Band Engraved" or "Maddox Engraved" have changed several times, the greatest confusion being with what we now call Hudson Engraved of Glendora Focus (Plate 36). Despite their common possession of narrow engraved bands filled with cross-hatching, arranged in curvilinear and horizontal patterns, the two types can now be clearly distinguished on the basis of tempering material: Maddox Engraved never has shell tempering, while Hudson Engraved almost always does, and the vessel shapes are different as seen in the present illustrations. The definition of Maddox Engraved still requires more research.

DISTRIBUTION
Principally in central and northern Louisiana and along isla÷Texas border, occasionally extending as far west as Frankston Focus area in Neches River valley; unknown so far in Arkansas and Oklahoma.

ESTIMATED AGE
Within Fulton Aspect times in Caddoan area, probably in earlier part, before Belcher Focus flourished.

REFERENCES
Webb, 1948, pp. 108-109, Plates 11, 12. At Webb's suggestion, modifications have been made in his original description, reducing the range of forms and designs. "Band" has been omitted from the name.
**PASTE**

Temper: Fine clay-grit and sand in varying proportions.

Texture: Fine to granular; compact.

Color: Basically light to dark grayish-blue, except for thin layer of buff on exterior under red film. Evidently firing the vessels after the red-ochre film was applied not only baked the film but produced a buff color on the original outer surface; since all the vessels are bottles, the interiors were not exposed to as much heat and remained grayish-blue like the remainder of the core.

Surface finish: From well smoothed to good polish on exterior with marks of smoothing tool producing a finely rippled surface in some cases; interiors unsmoothed with original coiling seams still visible.

**FORM**

Wall thickness: 3 to 6 mm.

Lip: Rounded to somewhat flattened and flush with side of neck; rarely turned outward (G).

Base: Convex bottoms, not notably thicker than body wall.

Vessel shape and size: Bottles the only known form. At Sanders Site these are characteristically somewhat elongated, with greatest diameter below middle and necks cylindrical to somewhat tapered (A-D); heights about 15 to 24 cm. From same site there is one complete triple bottle, the bodies connected with horizontal struts, and part of another such bottle. Those from other sites in Texas and Arkansas (F-I) have bodies more evenly convex from base to neck.

**DECORATION**

Treatment: Applique, punctating; surface always red-filmed.

Designs: At Sanders Site, bottles usually have three sets of small oval nodes running vertically on body, each set consisting of three rows of nodes; variations include two or four sets, each with two or four rows. In spaces between nodes, and in band around top of body, are slits or fingernail punctates set vertically (B, C), but some bottles have no punctates (A) and others have punctates but no nodes (D).

One triple bottle (E) and part of another have human faces modeled in low relief at top of each bottle and below their common spout; they have no nodes but a horizontal fillet runs around the outer side of each body, end-to-end with the struts, and two rows of punctates appear at top of each body below spout. Bottles from other sites (F-I) tend to have continuous fillets, one to three in a set, vertically or diagonally on body, rather than nodes.

**CULTURAL AFFILIATIONS**

A Sanders Focus type in Texas, not known in other complexes. Only one sherd reported from Nelson Focus (Bell and Baerreis, 1951), but at least two complete vessels (H, I) from Adair Site in upper Ouachita valley in Arkansas, a component of Mid–Ouachita Focus. Vessel from grave at Haley Place on Red River in Arkansas (Moore, 1912, Fig. 47) definitely a trade piece in Haley Focus.

**DISTRIBUTION**

Lamar, Hopkins, Wood, Franklin, and perhaps other counties in Texas.

**ESTIMATED AGE**

Some part of span 800-1200 A.D.

**REFERENCES**

Krieger, 1946, pp. 185-190, Fig. 14, and Plate 29.
MAYDELLE INCISED
(Plate 46)

PASTE
Temper: Clay-grit; occasionally pulverized potsherds or bone, or (very rarely) limestone particles.
Texture: Coarse and somewhat lumpy.
Color: Surfaces from cream to buff, shades of brown and gray. Cores light brown, gray, black. Much fire mottling with spots same color as core.
Surface finish: Interiors poorly smoothed; exteriors bumpy, roughened by brushing or incising.

FORM
Wall thickness: 5 to 11 mm.
Lip: Rounded, bent outward; occasionally somewhat flattened.
Base: Round, thick, flat disk to which side wall is attached.
Vessel shape and size: Exclusively jars with prominent rims meeting body at slight angle; mouths usually at least as wide as vessel body and often wider (B, C, F, G). Jars up to 30 cm. high are common and some as high as 50 cm. indicated by sherds; most, however, between 15 and 25 cm. high. Very large strap handles (2) and thick, crudely molded lugs (2 or 4) are fairly common on this type in Frankston Focus components (not shown) but apparently absent on very similar jars from Titus Focus like those shown. Soot and grease stains show cooking function.

DECORATION
Treatment: Incising, punctating, brushing.
Designs: Rims decorated with parallel incised lines, in hachures (A, B, F, G), grids of crossed diagonal lines (C, D), or diagonals pitched in alternate directions with punctates filling areas between them (E). A row of fingernail or stick punctates may appear as borderlines along the top and bottom of rim design (A, G). Bodies may be plain (B, D), incised with widely spaced vertical or diagonal lines (A, E), or brushed. The brushing is usually vertical (F) but may be random (G), and in one case consists of narrow bands of brush strokes crossing one another diagonally (C).

CULTURAL AFFILIATIONS
Frankston and Titus Foci. At one time, two types were defined, one in the Frankston Focus components which sometimes had strap handles and lugs, and the other in Titus Focus which appears never to have such appendages. They are now considered as one type with the handles and lugs a variable within it. The rim designs closely resemble those of Canton Incised of Sanders Focus (Plate 10) but the latter type can be distinguished by its cylindrical jars and carinated bowls, which never occur in Maydelle Incised; the Canton bodies, moreover, are always plain.

DISTRIBUTION
Found widely in northeast Texas in drainage systems of Neches, Angelina, Sabine, and upper Sulphur Rivers. Traded westward into central and northern Texas among non-ceramic people, much like Poynor Engraved.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
Krieger, 1946, Figure 18.
MEANS ENGRAVED

(Plate 47)

PASTE
Temper: Fine clay-grit; small amount of sand; or none.
Texture: Fine, compact.
Color: Principally shades of gray and gray-brown from light
to dark and nearly black. Lighter vessels may be fire-
mottled (J, M). Cores cream to gray.
Surface finish: Poorly smoothed to well polished.

FORM
Wall thickness: 3 to 5 mm.
Lip: Rounded and flush with rim or turned outward.
Base: Tends to be convex on bottles, flat on bowls. Protruding
or "extended" base occurs on bottles (F).
Vessel shape and size: Effigy bottles (A, K, L); tripod bottles
with legs expanded at feet (M); bottles with thickened
area around top of body (G, I); compound bottle with two
distinct shoulder areas (H); small carinated bowls (B, J);
effigy bowls (D, animal head facing upward on one edge,
tail opposite; E, bird head and tail, two wings at sides);
squash (?) effigy with stem below mouth and small sus-
pension holes (C). Possibly other shapes will be added.

DECORATION
Treatment: Engraving, applique.
Designs: Recognized mainly by extensive use of fine, even
ticking on curved and straight parallel lines. Also plain
lines (A, C), alternating plain and ticked lines (F, H, K,
L), and narrow bands instead of ticked lines (I). Designs
very gracefully executed at times; may be repeated two
times, as on sides of effigy; three times, as on sides of tri-
pod; four times on bottles and bowls; or continuously hori-
zontal without breaks. Bottles sometimes have thickened
area at top of body, divided into four parts by vertical ap-
plique fillets (G-I). Tiny applique eyes, nose, lips, ears
form two highly conventionalized faces on opposite sides of
bottle F. Vessel A has single applique ridge on back; K has
three rows of nodes on back; and C has four applique ridges
lengthwise on top, bottom, and two sides. Red pigment
common in lines.

CULTURAL AFFILIATIONS
A Mid-Ouachita Focus type not yet known in other complexes.
Affiliation seen with types Friendship Engraved (Plate 21)
and Hodges Engraved (Plate 32) in occasional mixing of
designs on same vessel: vessel H has Friendship design on
upper shoulder, Hodges design on lower shoulder.

DISTRIBUTION
Southwest Arkansas, especially in Ouachita River valley.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
None. Type name suggested by Mrs. T. L. Hodges.
Texas Archeological Society

MILITARY ROAD INCISED

(Plate 48)

PASTE
Temper: Clay-grit, sand, fiber. Shell particles, not necessarily intentionally added.
Texture: Compact, fine to somewhat coarse.
Color: Shades of brown and gray-brown or reddish-brown. Cores about same.
Surface finish: Smoothed to slightly polished.

FORM
Wall thickness: 4 to 7 mm.
Lip: Rounded, turned outward; may be notched on outer edge.
Base: Convex to flat but not much thicker than side wall.
Vessel shape and size: Jars exclusively, from quite small to very large, height 6 or 7 cm. to more than 40 cm. Rim usually forms definite angle with body and curves or slants outward so mouth diameter is more or less equal to that of body.

DECORATION
Treatment: Incising, punctating.
Designs: Most common are sets of parallel lines around rim or body, or both, either horizontal or meandering, or both. Spaces between these sets of lines are filled with slit or fingernail punctates set vertically or at right angle to meandering lines (A). The punctates are sometimes so close together as to give an impression of rocker stamping and perhaps they were sometimes intended to simulate this technique. Round punctates made with blunt instrument also used (E). Diagonal lines and single rows of punctates; herringbone patterns with one or more rows of punctates (B, H) and various similar combinations (D, F, G, I) may belong to type although they are not common.

CULTURAL AFFILIATIONS
A Mid-Ouachita Focus type, particularly common in Clark and Hot Spring Counties, Arkansas, where best and most regular designs are found (A, E). The typical meandering lines do not occur in any other focus but the designs that grade into diagonal lines and horizontal rows of punctates occur in Texarkana and perhaps other foci.

DISTRIBUTION
Principally in vicinity of Arkadelphia in Clark and Hot Spring Counties, Arkansas, extending northward to Garland County, Arkansas, with less regularity of design (B, C-I), and southward as far as great bend of Red River where mergings into other utility types occur.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
T. L. and Mrs. Hodges, 1945, pp. 104-107; Plate 18, No. 2, described as "Military Road Meander Incised". Although meander is characteristic, this is dropped from name to allow for straight-line motifs as alternatives.
MONKSTOWN FINGERNAIL PUNCTATED
(Plate 49, A-C)

PASTE
Same as Sanders Plain and Sanders Engraved.

FORM
Wall thickness: 5 to 8 mm.
Lip: Rounded and flush with rim or turned outward slightly.
Base: Flat, thick disk to which body wall was attached.
Vessel shape and size: So far as known, includes only jars about 10 to 20 cm. high, rim joining body at shallow angle and flaring outward slightly; body and mouth diameter about the same. These jars usually have two opposed loop handles, upper end attached to lip and one or two peaks rising above lip (B, C), or two opposed small solid lugs rising slightly above lip (A).

DECORATION
Treatment: Lines made by placing fingernail impressions end-to-end, or pinches placed in rows.
Designs: Parallel lines, usually both straight and curved, placed in sets in various ways around body and over handles or lugs. Some of these sets are well spaced, concentric lines or arcs (A); others cover practically the whole surface except the base (B, C). Although the sampling is small, there appears to be a tendency for the smallest jars (B, C) to be completely covered with such decoration, and the largest (A) to be decorated around the upper part, the remainder plain.

CULTURAL AFFILIATIONS
A Sanders Focus type in Texas. The particular jar shape with loop handles or lugs, and the set of the punctated lines, are distinctive and not duplicated elsewhere, although Killough Pinched of Frankston Focus (Plate 41) is similar, and most Caddoan foci have fingernail punctates of some kind.

DISTRIBUTION
Sanders Focus area from Red River valley in northern Lamar and Fannin Counties southward to upper Sabine River valley in Van Zandt County. May occur elsewhere as trade ware, but difficult to distinguish from similarly decorated pottery of other Caddoan foci unless shape and presence of handles or lugs can be ascertained.

ESTIMATED AGE
Some part of span 800-1200 A.D.

REFERENCES
Krieger, 1946, pp. 185-191, Fig. 14 and Plate 29.
NASH NECK BANDED
(Plate 50)

PASTE
Temper: Clay-grit or pulverized shell.
Texture: Compact, granular; porous and soft when shell particles have leached out.
Color: Various shades of brown, gray, and gray-brown; some light yellow-brown. Mottling due to uneven firing is common. Cores generally darker than surface.
Surface finish: Interiors usually rather well smoothed; exteriors about same.

FORM
Wall thickness: Range 3 to 10 mm., average 5 or 6 mm.
Lip: Rounded, bent outward slightly.
Base: Convex on small vessels, flatter on large vessels (I-K).
Vessel shape and size: Occurs only in form of jars. Some bodies are squat, others globular or somewhat elongated. Raising of rim into four peaks is common, either very pronouncedly (A) or with small lobes rising from rim (B, C, F-7). Rims bend outward from slightly (F) to sharply (A) so that mouths are sometimes broader than bodies. Loop handles (C), strap handles (H), or lugs (G), all fairly common, always four in number. Most vessels 10 to 25 cm. high, but range from 5 or 6 cm. to about 60 cm.

DECORATION
Treatment: Crimping of neck coils, applique, incising, fingernail punctates.
Designs: Type recognized chiefly by rather careful, regular crimping of rim coils, giving corrugated effect or "neck banding". Number of coils or bands varies from one to six with no particular number preferred. A simulation sometimes produced with vertically-placed fingernail punctations in unsmoothed neck coils (C, D, H). Vertical rows of appliqued nodes or fillets usually occur on rim and upper body of these vessels, dividing each into four segments; those on rim sometimes in line with those on body, sometimes equidistant between them. Appliqued chevrons occur on upper bodies (not shown). Incising as on body of K is unusual.

CULTURAL AFFILIATIONS
Common type in both McCurtain and Texarkana Foci. Specimens J, K from Titus Focus components, where shell temper and careful execution of crimping mark them as trade pieces. Relationship with LaRue Neck Banded (Plate 42) of Titus and Frankston Foci obvious, but latter type includes only large rough (cooking?) vessels, the neck crimps are carelessly done, and handles, lugs, applique, rim quadratation, and shell temper absent.

DISTRIBUTION
Primarily Red River valley above great bend in McCurtain and Choctaw Counties, Oklahoma; Lamar, Red River and Bowie Counties, Texas. No neck banding of any kind known to be indigenous to Arkansas or Louisiana.

ESTIMATED AGE
1400-1700 A.D. Extends into European contact period at Kaufman site (Harris, 1953).

REFERENCES
Krieger, 1946, pp. 238-239 and Plate 35; Bell and Baerreis, 1951, Plate 10; Harris, 1953, passim and Plate 7.
NATCHECHOES ENGRAVED

(Plate 51)

PASTE
Temper: Almost always finely pulverized shell; otherwise none.
Texture: Fine, compact.
Color: Buff, yellowish-brown, gray-brown. Red film fairly common (B, B', C) and contrast with lighter surface exposed by lines. Cores buff, gray.
Surface finish: Fair to good polish.

FORM
Wall thickness: 2 to 4 mm.
Lip: Rounded and usually turned outward.
Base: Convex on bowls, somewhat flatter on bottles.
Vessel shape and size: Principally small carinated bowls of special form, rim being low, slightly concave, and so attached as to make an almost continuous recurve with body wall; the mouths are thus considerably wider than the bodies (D, F, I-K). A similar body may occur with a higher, more vertical but still concave rim (G). Animal-effigy bowl (B-B') and four-legged effigy bottle (C) are unusual forms. Bottles with large bodies and short, spool-shaped spout fairly common (A, H). Peculiar platter decorated on inner surface has a hollow conical pedestal base with several large holes in sides (E).

DECORATION
Principally scroll bands, outlined by cross-hatched areas and with ticked line bisecting each band down middle; bands may be single arms running outward and curling at end, S-shaped elements with curl at each end, meanders which fold back on one another at intervals, or variations of scroll motif. Cross-hatched flanking areas include blank disks of different sizes, usually touching the scroll bands. Most elaborate designs include scrolls of several sizes cleverly arranged to fill spaces and maintain perfect balance. Rims have rectilinear designs, usually two panels in which upright lines alternate with horizontal ticked lines. Major units repeated three, four, or five times, all well represented. White and (rarely) red pigments used in lines.

CULTURAL AFFILIATIONS
Confined to Glendora Focus and important diagnostic type for historic Caddo. One of few Caddoan types with designs on bottoms of bowls, a trait noted on a few specimens of Ripley Engraved of Titus Focus (Plate 58, K-O). The latter are simpler, however, and the vessels never shell-tempered. The scrolls of Hodges Engraved (Plates 32, 33) are on the whole distinct from those of Natchitoches, as are the vessel forms, but occasionally it would be difficult to classify a vessel as either Hodges or Natchitoches except through the presence or absence of shell temper. The bottle forms (A, H) show affinity with those of type Keno Trailed (Plate 39).

DISTRIBUTION
From city of Natchitoches in central Louisiana over northern Louisiana, extending into northeast Texas as far as Lamar County. May occur in adjacent corners of Arkansas and Oklahoma but not reported yet.

ESTIMATED AGE
1500–1800 A.D. or part thereof.

REFERENCES
Webb, 1945, pp. 63-64 and Plates 11-14. Krieger, 1946, Figure 18. Both these works were written before Hodges Engraved was recognized, necessitating changes.
PASTE
Temper: Fine clay-grit or mixed fine sand and grit; occasionally bone particles.
Texture: Fine, compact to somewhat coarse; surfaces may feel slightly sandy.
Color: Surfaces cream, buff, gray, and light to dark brown. Cores same as surfaces or somewhat darker. Fire-mottling.
Surface finish: From poorly smoothed to fairly well polished.

FORM
Wall thickness: 3 to 6 mm.
Lip: Rounded and usually flush but sometimes turned outward slightly.
Base: Slightly flattened; square bowl (C) has flat base.
Vessel shape and size: Primarily small squat bowls with rims vertical or slanted slightly inward or outward (A, B, E-J). Bodies sometimes pushed out into four lobes (H). Double vessel (D) consists of one such bowl built on top of another. Also olla-like vessels with larger, globular bodies and small mouths (K). Carinated bowls common, with high rim slightly to pronoucedly convex (L). One small ladle-like vessel (M). Lugs present on two sides of square bowl, perforated horizontally (C).

DECORATION
Treatment: Engraving.
Designs: Usually ticked horizontal lines around rim, body plain (E, F, J). Concentric circles and spirals on body, frequently combined with two horizontal lines at top and bottom of rim; in these cases, design unit usually repeated three times (A, D, G, I, K, M), occasionally four times (H). Carinated bowl rims commonly have two large arms curving toward one another from the upper and lower margins, each arm consisting of two, three, or four parallel lines (L). These units likewise usually repeated three times, separated by two sets of arched lines placed back-to-back. White pigment occurs commonly in lines and ticks, occasionally red ochre pigment. Bottoms of carinated bowls commonly have brushing running horizontally (L).

CULTURAL AFFILIATIONS
Allen Focus exclusively. The squat bowls (A, etc.) are similar to those of the pre-European Frankston Focus type Poynor Engraved (Plate 55) but they lack the series of oval panels around the rims of the latter, and the Poynor type has little if any ticking. The large carinated bowls with convex rims are again similar to those in the Poynor type but the designs are easily distinguished. Frankston Focus pottery does not have the sandy feel of Allen Focus polished ware.

DISTRIBUTION
Small area in upper Neches River drainage system, principally in Cherokee, Anderson, Henderson, and Smith Counties. May occur in Nacogdoches, Rusk, and other counties. Wherever found, it is a "marker type" for the historical Hasinai or Tejas tribes of the Caddo family.

ESTIMATED AGE
1600-1800 A.D. or part thereof.

REFERENCES
Krieger, 1946, Figure 18, included this type with Frankston Focus. A separate Allen Focus for the historic material was created later.
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PEASE BRUSHED-INCISED
(Plate 53)

PASTE
Temper: Clay-grit; occasionally pulverized bone added.
Texture: Granular with medium-sized particles.
Color: Surface colors shades of buff, light gray, occasionally
dark gray to black; mottling due to uneven firing. Core
usually darker than surface.
Surface finish: Interior smoothed; exterior roughened by
decoration.

FORM
Wall thickness: Extreme range 4 to 10 mm., average 5 to 7 mm.
Lip: Sharply convex to flat but not widened.
Base: Flat, round disk to which wall was attached.
Vessel shape and size: Jars with rim varying considerably in
height and slightly outflaring. Oral diameter usually less
than that of body. Most known specimens between 12 and
24 cm. high; no very large examples or miniature vessels
have been noted.

DECORATION
Treatment: Incising, brushing, applique, and punctation in
various combinations.
Designs: One of consistent characteristics is that entire ex-
terior, except for base, is decorated. Body divided into
panels with vertical applied fillets or rows of punctates,
or punctates made in applied fillets; no consistent num-
ber of panels which may vary from six to 20 or more.
Panels filled with brushing or parallel incised lines set
diagonally in alternating directions with "herringbone"
effect. Lines often deeper at one end than other. Rim
decoration similar except brushing or incised lines may
run in different directions from those on body. Almost
always there is at least one row of punctates around rim,
made through the brushed or incised lines; often there are
two or three such rows, one just under the lip, one around
the middle of rim, and perhaps one at base of rim.

CULTURAL AFFILIATIONS
Primarily associated with Bossier Focus, but may also occur in
Haley Focus and related components. The type appears to
be closely related to Haley Complicated Incised (Plate 27),
but is simpler and lacks the circles and scrolls of this type.
The panels of diagonally-placed lines are similar to Dunkin
Incised of Alto Focus (Plate 18), but the latter type lacks
brushing, applique, and punctating; and cylindrical ves-
sels are unknown in the Pease type. In general arrange-
ment of design it is reminiscent of Sinner Linear Punctated
of Bossier Focus (Plate 63).

DISTRIBUTION
Extreme northeastern edge of Texas and much of northwestern
Louisiana, extending up Red River valley into southwest-
ern corner of Arkansas and possibly farther north.

ESTIMATED AGE
Precedes Belcher and Texarkana Foci of Fulton Aspect; may
extend from Haley Focus time approximately to beginning
of Belcher Focus (Webb).

REFERENCE
Webb, 1948. Sherds of this type were previously included in
"Smithport Incised" by Webb and Dodd (1941, Plate 18,
Nos. 4, 8-10, 12, 13).
PASTE
Same as Crockett Curvilinear Incised (Plates 14-16) except that surfaces poorly to fairly well smoothed, but not polished.

FORM
Wall thickness: Range 4 to 9 mm., average 6 or 7 mm.
Lip: About equally divided between rounded and flat, some of latter sloping to exterior. Some carinated bowls have greatly widened flat lips, up to 21 mm. wide, most of widening being on inside rather than outside of rim. One rim circular in cross-section (E).
Base: On cylindrical vessels (C) they are flat except for rounding at edge; on all bowls they are convex and not differentiated from body.
Vessel shape and size: Variations of large carinated bowls most common, diameters up to 40 cm. or more, heights up to 12 cm. or more; rims flat to slightly convex on exterior and vertical to slanting somewhat outward, as reconstructed from sherds (A, B, E-G, I, J). A few apparently cylindrical vessels up to 20 cm. or more in height (C). Two small bowls with wide, shallow, convex bottoms and high, concave rims, one slanted inward (D), and one outward (H). Appendages absent.

DECORATION
Treatment: Incising, punctating, both sometimes smoothed over.
Designs: Primarily straight-line motifs consisting of slanting bands, triangles, diamonds, triangles within triangles, and diamonds within diamonds; on rims of carinated bowls, whole sides of other small bowls, and apparently all but the extreme tops and bottoms of the cylindrical vessels. Slanting bands and other figures may be filled either with punctates or short parallel lines, or these may be alternated with one another and with plain areas in various combinations. The broad, flat lips may be plain or have spaced punctate-filled triangles, or bear engraved designs like those of Holly Fine Engraved. Between Crockett and Pennington an arbitrary line was drawn, the definitely curvilinear motifs assigned to the former, and the straight-line motifs to the latter. However, a few designs consisting of gently curved meanders, the flanks filled with punctates or excised (F, G) could not be easily assigned to either type. Lines and punctates sometimes have traces of red-ochre, but more often of a white pigment.

CULTURAL AFFILIATIONS
An Alto Focus type found on Louisiana as well as Texas components. Occurs as trade ware as far north as Crenshaw Site in Miller County, Arkansas. Closely affiliated with Crockett type in Alto Focus, but unlike the latter, does not extend into Haley and Spiro Focus as a resident type. Widened lips and some vessel shapes similar to those of Holly type.

DISTRIBUTION
Alto Focus components in Texas from Chupek Site near Waco eastward into northwestern and north-central Louisiana.

ESTIMATED AGE
Some part of span 500-1000 A.D.

REFERENCES
POYNOR ENGRAVED
(Plates 55, 56)

PASTE

Temper: Clay-grit; occasionally a few bone particles.
Texture: Coarse but compact.
Color: Surfaces center around light yellowish brown and buff; range to cream and to dark reddish brown. Fire mottling produced gray spots possibly done intentionally at times. Cores gray.
Surface finish: From poorly smoothed and bumpy to well smoothed and at times a fair polish. Interiors and exteriors about the same.

FORM

Wall thickness: Range 3 to 8 mm., average 4 to 5 mm.
Lip: Plain, rounded, usually flush with sidewall but occasionally turned outward; notching occurs.
Base: Thick, flat disk to which wall was attached.
Vessel shape and size: Most common form is a squat bowl with rounded body and rim either vertical or somewhat everted (Plate 55, B, J) and mouth diameters notably smaller than those of bodies. These bowls are from 12 to 20 cm. in maximum diameter although miniatures occur as small as 5 cm. across. In one case such a bowl has four long legs joined by a clay ring at their feet, as in Plate 24, A, C, H, except that the “ring” is a rounded square. Carinated bowls are also common, usually with high rims which slant inward (Plate 55, A, D-I); the rims may be quite flat but are usually slightly to strongly convex, and the vessel bodies also present various degrees of flatness and convexity between rim and base. Bowls such as Plate 55, C, with rim slanted outward and body of considerably less height than the rim, are very exceptional. Carinated bowls range in diameter from 18 to as much as 40 cm. in diameter. Bottles occur in two varieties: elongated, with short necks hardly distinguishable from the bodies (Plate 56, A-G); and globular with long necks (Plate 56, H-J). The former form is unique for the entire Caddoan archeological area, while the latter is more in keeping with bottles occurring in many other types. In both groups, heights range between 20 and 30 cm.

DECORATION

Treatment: Engraving, punctating.
Designs: On bowl rims the motifs center around a series of negative ovals made with concentric lines arched back-to-back; these may be spaced somewhat apart and the area between them filled with other lines (Plate 55, A), cross-hatching or scrolls (Plate 55, C, D). Punctated areas or small punctated circles may occur within the ovals (Plate
The bottles also show a wide variety of motifs involving negative ovals and circles, but these may run in vertical panels (Plate 56, A, E, F) instead of horizontally as on the bowls. Designs are usually poorly executed, with little contrast between surface colors and the cores exposed by engraving; red ochre pigment appears occasionally in lines.

CULTURAL AFFILIATIONS

This type belongs to Frankston Focus, of which it is the best diagnostic trait. It seems never to have spread into other foci as manufactured ware although numerous sherds have been found in central and north-central Texas, where they appear to have been carried as trade pieces among people who made no pottery of their own. Bowls of shapes and designs similar to those on Plate 55 have been found in graves of the historic Allen Focus, showing that the type survived until European articles reached eastern Texas; but these are infrequent and bottles such as those on Plate 56 have not yet appeared in Allen Focus association. The design on Plate 56, D, with reversed S-shaped elements in the panels, shows influence from the type Ripley Engraved of Titus Focus. Unlike Titus Focus pottery, in which design units are almost invariably repeated four times, those of Poyner Engraved may be repeated only twice (Plate 55, C; Plate 56, C, E, F, H), three times (Plate 56, A), four times (Plate 55, G; Plate 56, D, J), or any number up to a dozen or more. In this respect, Poyner Engraved appears to bear a relationship with several Alto Focus types which existed in the same general area at an earlier time; in that complex, designs (whether incised or engraved) were also repeated with whatever frequency best fitted the rim, yet in design motifs there is hardly any resemblance between Alto and Frankston Focus.

DISTRIBUTION

Neches River valley in eastern Texas, from headwaters to junction with Angelina River. Carried westward, probably as trade ware, to Colorado River valley of central Texas and northwestward to Dallas County or perhaps farther. Some components known in Smith and Van Zandt Counties in upper Sabine River valley. Despite relatively poor quality it appears to have been the most widely traded Caddoan pottery among tribes living west of the Caddo.

ESTIMATED AGE

1200–1600 A. D., surviving infrequently until perhaps 1700 A. D.

REFERENCES

Krieger, 1946, p. 206 and Figure 18.
PASTE
Temper: Fine clay-grit; occasionally pulverized white or gray kaolin.
Texture: Compact and firm in some vessels, grading to coarse and crumbly in others.
Surface finish: From poorly smoothed to fair polish.

FORM
Wall thickness: 4 to 7 mm.
Lip: Rounded and almost always rolled outward.
Base: Round, flat disk thicker than side walls.
Vessel shape and size: Great variety includes carinated bowls with rims usually slanted outward but sometimes vertical or slanted inward (57, A-C, E, H; 58, A-E, G, I, J); compound bowls with high convex shoulders and everted rims (57, D, F, G, I); deep, nearly cylindrical bowls (58, F); simple bowls (58, H); small jars with rims curved outward (59, A, G); bottles of various forms (59, B-D, F, H-J); ollas (59, K, L); and one instance of square box (59, E). Four rim peaks occur on compound bowls (57, I) and jars (59, G); four-lobed bodies on bottles (59, I) and small jars (not shown).

DEcoration
Treatment: Engraving, excising, brushing.
Designs: Slanted scrolls repeated four times on rims of carinated bowls and shoulders of compound bowls (57, A-H; 58, C, D, I; the strips in 57, J-U give further examples). Flanks of scrolls have graded circles or small excised areas; a simulation consists of whole excised triangles (57, I). Scrolls often end in circles in center of which is small circle, diamond, or cross. Other designs are horizontal with S-shaped elements formed by excising (58, F, H), or diamond-in-circle alternated with diamond-in-diamond and small excised triangles pointing up and down along borderlines (58, A, B, J). Four-armed interlocking scrolls occur on the bottoms of five carinated bowls, as shown in 58, K-O (rim design at top of each drawing; body design in circle below). Carinated bowls occasionally brushed vertically on body between rim and base (58, A). Bottles, small jars, ollas, and square box have concentric circles with ticking or pendant triangles on lines (59, A, B, E, F, H, J), plain circles with cross in central one (59, K, L), and scrolls with circle-and-cross in center (59, C, D, I). Various other combinations too numerous to mention. Red and white pigments in lines.

Cultural Affiliations
Titus Focus. Scrolls on bowl rims sometimes similar to Hodges Engraved but less well done, lines wider apart, vessel forms distinct, etc. Scrolls on bowl bottoms (58, K-O) suggest prototype for Natchitoches Engraved.

Distribution
Very common in Titus, Morris, Franklin, Upshur, Camp, and Hopkins Counties; also occurs northward to Red River and southward to Smith, Gregg, and Harrison Counties.

Estimated Age
1200–1500 A.D.

References
Krieger, 1946, Figure 18. Type is less inclusive now (see Wilder Engraved).
SANDERS PLAIN
(Plate 60; 49, D-G)

PASTE
Temper: Abundantly tempered with clay-grit, sometimes including pulverized potsherds; pulverized bone occasionally added. Some bottles have sand as well as clay-grit.
Texture: Coarse but quite firm.
Color: Surfaces principally shades of brown from tan to dark; a rich chocolate is characteristic; gray-browns also occur. Some fire-mottling, usually resulting in different shades of brown. Baked red film on perhaps 15 per cent of vessels, primarily bowls (Plate 60, D, E). Cores darker than surfaces, dark brown or gray to black.
Surface finish: Usually poorly to well smoothed but seldom well polished; bottle interiors not smoothed. Surfaces often evenly rippled from marks of smoothing tools.

FORM
Wall thickness: Range 4 to 10 mm., average 6 or 7 mm.
Lip: Rounded to flat, flush with rim; may be notched along outer edge or boldly scalloped (Plates 60, H; 49, G).
Base: Flat, thick disk to which side wall was attached; on bottles, “goblets”, it may be more convex.
Vessel shape and size: More or less conical simple bowls, ranging up to 42 cm. across and 18 cm. high (Plates 60, D, H; 49, G). Carinated bowls even larger, up to 50 cm. or more across and 20 cm. high, with rims 2 to 8 cm. high, flat on outer face, and vertical or slanted slightly inward or outward (Plate 60, F). Hemispherical bowls with two lugs projecting upward and outward from lip on opposite sides of mouth; other such bowls without lugs (Plate 49, E, F). Bottles, rather poorly made (Plates 60, I; 49, D); “goblets” with small bodies and large cylindrical necks, sometimes with two opposed suspension holes near top (Plate 60, C, G); and (rarely) barrel-shaped vessels (Plate 60, A).

DECORATION
None, except for occasional red film, lip scalloping or notching.

CULTURAL AFFILIATIONS
Dominant type of Sanders Focus, constituting 60 per cent or more of the total pottery, a unique situation in Caddoan archeology, where most foci have very little plain ware. Reported also in Nelson Focus, a mixture of Sanders and Spiro Focus traits in southeastern Oklahoma (Bell and Baerreis, 1951), and in “Late Component” at Spiro Site (Orr, 1946).

DISTRIBUTION
Sanders Focus area in Texas, from Red River valley in northern Lamar and Fannin Counties, southward to upper Sabine River valley in Van Zandt County; also in Choctaw County, Oklahoma. Found as trade ware in Wylie Focus sites in Dallas and Collin Counties, in Central Texas Aspect sites in middle Brazos River valley, and perhaps elsewhere.

ESTIMATED AGE
Some part of span 800-1200 A.D.

REFERENCES
Krieger, 1946, pp. 185-186, Fig. 14, and Plates 24-26, 28, A, B, D.
SANDERS ENGRAVED

(Plate 61)

PASTE
Same as Sanders Plain. Red-filmed surfaces likewise occur (F, G).

FORM
Wall thickness: Extreme range 4 to 10 mm., average 6 or 7 mm.
Lip: Rounded or slightly flattened and flush with rim.
Base: Flat, thick disk on larger bowls; evenly convex bottom on smaller bowls and bottles.
Vessel shape and size: Carinated bowls range in diameter from about 18 to 36 cm., in height about 8 to 12 cm.; rims 2 to 6 cm. high (A, E, G, I). Peculiar deep bowls also relatively common, broadest near bottom, slightly convex sides slanting somewhat inward, two small lugs on opposite sides of mouth jutting upward and outward from rim (C, D). Large neckless, gourd-shaped bottles, with heights up to 30 cm. and greatest diameter somewhat below the middle (H). Engraved sherds also found which suggest more ordinary bottle forms of Caddoan foci, but none have been restored. Unusual shapes include a small “goblet” with cylindrical upper part and small body (B), and a globular bowl with sharply outflaring rim (F). The “goblet” (B) and all known examples of the large neckless bottles (H) have two opposed suspension holes not far beneath the lip.

DECORATION
Treatment: Engraving.
Designs: Only very simple straight-line motifs in a single zone around rims of carinated bowls, upper parts of deep bowls, interior of rim of bowl (F), the cylindrical part of the “goblet” (B), and the uppermost part of the large neckless bottles (H). The designs may consist only of parallel lines pitched in opposite directions at intervals (G), groups of vertical lines at intervals (rim interior of F), and a continuous series of triangles filled with hatching or cross-hatching; such triangles may lie point down (A, B, C, D), point up (H, I), or in opposed pairs (E). There may be two or three horizontal border lines above the triangles (C, D) but usually there are no borders either above or below. Design motifs repeated whatever number of times fits vessel best; while four may occur (as on H), this appears to be incidental. Red ochre pigment commonly found in lines.

CULTURAL AFFILIATIONS
A Sanders Focus type, following Sanders Plain in frequency. Reported in Nelson Focus, southeastern Oklahoma (Bell and Baerries, 1951), and in “Late Component” at Spiro Site in eastern Oklahoma (Orr, 1946; Krieger, notes).

DISTRIBUTION
Same as Sanders Plain, both as resident and as trade ware.

ESTIMATED AGE
Same as Sanders Plain.

REFERENCES
Krieger, 1946, pp. 185-190, Fig. 14, and Plates 27, 28.
SIMMS ENGRAVED
(Plate 62)

PASTE
See type description for Barkman Engraved, except that Simms Engraved is frequently shell-tempered and occasionally red-filmed. Shell temper and red film rarely occur in the same vessel, however. The film, of powdered red ochre, was applied after firing and rubs off.

FORM
Wall thickness: 4 to 7 mm.
Lip: Thin and rounded, turned sharply upward or outward from an inward-slanting rim.
Base: Shallow bowls have no distinct base, but broad convex bottoms. The very deep nearly cylindrical bowls (see E) have flat to slightly convex bases of about same thickness as side walls.
Vessel shape and size: Bowls of a peculiar carinated form in that the rim is very narrow and bends inward sharply, at times almost at a right angle (see C, E), and the lip turns upward or outward at a right angle to the rim. The principal variation in form is in the depth of the bowls, most being shallow while occasionally one is as deep as E. Maximum diameters are about 30 cm., maximum height about 20 cm.

DECORATION
Treatment: Engraving.
Designs: Decoration is confined to the very narrow rim zone and consequently consists of very compressed designs. Sketches G–R illustrate some of the patterns, which are mainly rectilinear. Ticking common and tiny punctates made through polished surface sometimes occur as in Barkman Engraved (Plate 4). Red ochre pigment found in lines frequently, white pigment occasionally.

CULTURAL AFFILIATIONS
Type belongs primarily to McCurtain and Texarkana Foci; occurs occasionally in Titus and perhaps Belcher Focus, probably as trade ware. In at least two cases it extends into association with European trade objects: at the Kaufman site in Red River County (Harris, 1953), and as trade ware at the Jim Allen site in Cherokee County, type site for the historic Allen Focus in central East Texas. It is present also at the Hunt and Clements sites near Atlanta, Cass County, where some of the graves had European objects of iron and glass beads. It is not well known, or even definitely present, in the historic Glendora Focus components in Louisiana, from which it appears to be primarily a late prehistoric type in the Fulton Aspect, surviving until the beginning of European trade contacts, but not much longer.

DISTRIBUTION
Primarily close to Red River in Choctaw and McCurtain Counties, Oklahoma; Little River, Lafayette, and Miller Counties, Arkansas; and Red River, Bowie, and Cass Counties, northeast Texas. Elsewhere probably trade ware. Occurs seldom, if at all, in Louisiana.

ESTIMATED AGE
1500–1700 A. D.

REFERENCE
Krieger, 1946, p. 230 and Figure 18.
PASTE
Temper: Clay-grit; rarely some pulverized bone added.
Texture: Compact, firm.
Color: Surfaces cream, buff, shades of brown and gray to nearly black in fire-mottled spots. Cores same as surface or darker.
Surface finish: Interiors smoothed; exteriors nearly covered by decoration.

FORM
Wall thickness: 4 to 6 mm.
Lip: Rounded; usually notched along outer edge.
Base: Flat disk.
Vessel shape and size: Small jars about 10 to 15 cm. high, rims meeting bodies at slight angle and vertical to everted. Globular bodies with rim varying from low and everted to high and vertical (B). Webb (1948) includes small “cups”.

DECORATION
Treatment: Punctating, applique.
Designs: Body and rim almost completely covered with punctations set close together in closely spaced rows, so regular as to give the suggestion of cord marking. Punctations apparently made individually with round-tipped tool, although possibly they were made in rows with carved stamp at times (C). Less often they were made with tip of fingernail, small and carefully done in neat rows. The rows are arranged in parallel sets, pitched at different angles and either straight (C-E) or slightly curved (A, B). Quadrature sometimes affected with four single rows of nodes running vertically on body (E), or sets of fillets (D).

CULTURAL AFFILIATIONS
Principally a Bossier Focus type, possibly Haley Focus also. Use of sets of parallel lines pitched in different directions is somewhat similar to decoration of Pease Brushed-Incised, also of Bossier and possibly of Haley Focus (Plate 53). Webb (1948, p. 117) states that occasionally the decorative techniques of Sinner and Pease are combined, with regular fields roughened by linear punctations, separated by nodes, appliqued ridges, or single rows of heavy punctations. Some similarity in design arrangement also apparent with Dunkin Incised of Alto Focus (Plate 18) although the latter completely lacks applique and punctation. Webb also compares Sinner with type Lake Borne Incised of Tchefuncte period in lower Mississippi valley, pointing to the “startling similarity of decoration technique and design arrangement,” even though the intervening complexes of Marksville, Troyville, and Coles Creek lack these features.

DISTRIBUTION
Not found in quantity in any known site, but occurs widely in central and northern Louisiana and southern Arkansas. Apparently did not reach Bossier or Haley Focus components in eastern Texas.

ESTIMATED AGE
Transitional between Gibson and Fulton Aspects, possibly 1000–1200 A.D. Stratigraphically older than Belcher Focus at Belcher site in Louisiana.

REFERENCES
SPIRRO ENGRAVED  
(Plate 64)

PASTE (data from Orr, 1946, p. 237: see “Spiro 5 Type”)  
Temper: Fine clay-grit; rarely, bone.  
Texture: Very fine, compact, contorted; hardness 2.5 to 4, average 3.  
Color: Darker shades of brown; black; a few red-orange.  
Surface finish: Smoothed to polished.

FORM (data from Orr, 1946, p. 237: see “Spiro 5 Type”)  
Wall thickness: 5 to 8 mm., average 7 mm.  
Lip: Rounded and “contracting” (slanted inward?).  
Base: Disks predominate; convex bottoms rare.  
Vessel shape and size: (1) cylindrical jars; (2) jars with short, straight, and outflaring rims, and inverted pear-shaped bodies; (3) “spittoon” shape, globular body and tall rim (one case); (4) bottles with tall conical necks and spherical bodies; (5) hemispherical bowls; (6) vertical-rimmed bowls with rim ¼ to ¾ of vessel height; (7) hemispherical bowls with “two opposite open spouts on rim”; (8) globular bowls with two opposite tabs on rim. Examples of bottles in Plate 64 (A, C, D, F-H); bowls with two “open spouts” on rim (B, E); small jar with short, outflaring rim (I).

DECORATION  
Treatment: Engraving, incising, punctating.  
Designs: Concentric circles with parallel diagonal lines between the sets (A, B, E); tight spirals (C); sets of concentric or nested arcs (D, F, H, I); nested squares, with diagonals breaking across them or between different sets (G); and various similar combinations of striking beauty. Parallel horizontal lines always occur around the top of bottle bodies, sometimes at top of spout (G), and rims of other forms (B, E, I). Designs characteristically engraved through polished surface, but some may have been incised in still-plastic clay, then polished over. Fine punctates appear in circles and corners of designs (B, F, I). Red ochre pigment used in lines and punctates. Design units repeated four times most commonly; two, three, five also used.

AFFILIATIONS  
A Spiro Focus type, closely related to Holly Fine Engraved of Alto Focus (Plates 34, 35), particularly in bottle form with tapered spout, and design layout. The Spiro type lacks carinated bowls, common in Holly; the lines are bolder and spaced farther apart; incising may be substituted for engraving; and where Holly type has design corners excised, Spiro type uses punctating instead. The Holly type lacks “open spouts” on bowl rims (B, E); and several of its special features of rim and lip contour are lacking in the Spiro type.

DISTRIBUTION  
Eastern Oklahoma; southwest Arkansas to Crenshaw Site on Red River; Jaggers Site, Franklin County, Texas; Mustang Creek Site, southern Red River County, Texas; scattered specimens in private collections mainly from Red River valley in northeast Texas.

ESTIMATED AGE  
Some part of span 500-1000 A. D.

REFERENCES  
Orr, 1946 (“Spiro 5 Type”); Krieger, 1946, Fig. 19; Newell and Krieger, 1949, pp. 199-201 (“Spiro Fine Engraved” in these references); Bell, 1953.
PASTE

Temper: Often none visible; otherwise, fine clay-grit or small amount of said; rarely, finely pulverized bone or tuff.

Texture: Fine, compact, usually does not break easily.

Color: Various shades of gray and brown from very light to very dark and almost black. Some fire-mottling on lighter-colored vessels but best ones are evenly dark gray or brown. Bright red, baked film occurs occasionally (Plate 65, B, D, G, L). Soft, flaky red film (Plate 65, K) may have been applied after firing. Cores gray to black.

Surface finish: From smoothed to well polished; bottles not smoothed inside.

FORM

Wall thickness: 2 to 5 mm. but most are 4 or 5 mm.

Lip: Rounded, almost always rolled outward.

Base: Round, flat disk on a few vessels (Plate 65, M-O); usually convex or somewhat flattened. Some bottles have "extended base" (Plate 66, D, E, I, K), probably solid.

Vessel shape and size: Variety of small bottles, bowls, jars. Some bowls have small bodies and high, outward-flaring rims (Plate 65, A, C, H) with mouth diameter considerably greater than body. Very deep bowls with rim gently flaring outward but not distinct from body (Plate 65, D, G, M). Simple bowls (Plate 65, N). Carinated bowls with rim slanted inward or outward (Plate 65, I, L, O). Small polished jars with rims low to high and vertical to flaring outward, but mouth diameter less than that of body (Plate 65, B, E, F, J). Compound bowl (Plate 65, K). Hemispherical bowl (Plate 66, J). Bottles with spouts vertical, slightly tapered, slightly outflaring, or spool-shaped with bulge in middle (Plate 66, B, C, E, I). In one case, bottle mouth covered with node-studded cap except for small opening (Plate 66, G).

DECORATION

Treatment: Engraving, punctating.

Designs: Featured principally by tight scrolls, lines close together, and spirals which look almost like concentric circles. Almost invariably the center of the scroll or spiral shows two arms hooked toward one another but separated by a short gap (seen most clearly in Plate 66, A). The scrolls sweep gracefully around vessel, sometimes very evenly spaced. Ticks occur on lines (Plate 65, E, F, G, I; Plate 66, F) and occasionally small triangles are pendant from the lines (Plate 65, B, J, P). Scrolls adjusted to the narrow horizontal space available on a carinated bowl (Plate 65, I, L, O) are naturally not handled as freely as those on jar and bottle bodies with more space. In at least
one case (Plate 66, I) a bottle with tight concentric circles has been included because the appearance is almost like that of the scrolls on bottles K, L. In Texas and Louisiana the design is almost invariably repeated four times; specimens from west-central Arkansas (Plate 66, H, J, K) usually repeat the design three times, but two and four are known. An area around the base of the spout, a square when seen from above, may be filled with small punctates (Plate 66, D, E, I). Both white and red pigments appear in the lines with some frequency.

CULTURAL AFFILIATIONS

Most commonly associated with Titus and Belcher Foci, less frequently with Texarkana and Mid-Ouachita. Conceptions of what is to be included in type have altered several times. Webb and Dodd (1941) considered such vessels to be one of the numerous sub-types of Belcher Engraved. Krieger (1946, Figure 18) labeled some vessels "Taylor Engraved" in Titus and Belcher Foci which contrasted in several ways with Ripley Engraved on the one hand, and Belcher Engraved (as it was then restricted by Webb) on the other. Webb (1948) then labeled some Belcher mound vessels as "Taylor Engraved" but he and the authors have recently decided that this was too inclusive also as it embraced specimens which we would now call Hodges Engraved (Plates 32, 33) and Glassell Engraved (Plate 25). Thus, in Webb, 1948, Plate 11, Nos. 3 and 4 would still be regarded as Taylor Engraved but No. 5 is clearly Hodges Engraved; and on Plate 12, Nos. 7-11 the sherds would probably now be called Glassell Engraved. Future research will require that a clearer distinction be made between Taylor Engraved and what we have called Wilder Engraved of Titus Focus as a new type (Plate 68). The latter does not occur in Louisiana or Arkansas as a resident type but it shares with Taylor Engraved some designs with the two hooked arms in the center of the scrolls. Webb (1948, p. 110) reported that "Taylor Engraved" sherds are found on the majority of Bossier Focus sites, as well as in Titus and Belcher Foci, but association of this type with Bossier should be re-examined.

DISTRIBUTION

Found widely in northeast Texas, northwest Louisiana, and southwest Arkansas. Occurrence in Oklahoma may be expected, if only as trade ware.

ESTIMATED AGE

1200-1500 A. D. (span allowed for Titus and Belcher Foci). If in Bossier Focus might be dated somewhat earlier at beginning.

REFERENCES

Webb and Dodd, 1941, pp. 90-95 (see sub-types of "Belcher Engraved"): Krieger, 1946, pp. 230, 232, 236, Figure 18; Webb, 1948, pp. 109-110, Plates 11, 12.
PASTE
Temper: Clay-grit; rarely, bone.
Texture: From granular and compact to coarse and crumbly.
Color: Various shades of brown, reddish-brown, and brick red.
Largest and thickest vessels tend toward yellowish-brown and reddish-brown; smallest toward medium to very dark brown, almost black. Cores darker than surfaces.
Surface finish: Many vessels covered with design; others smoothed but not polished over plain areas.

FORM
Wall thickness: Extreme range 3 to 11 mm., average about 6 mm.
Lip: Rounded and flat in about equal numbers, some flat ones sloping to exterior. Most are same thickness as body and rim, a few widened to as much as 17 mm., flat and horizontal on top.
Base: Flat disk, 6 to 9 mm. thick, in all cases except one, a flat square base on cylindrical vessel.
Vessel shape and size: Most common are small jars 7 to 20 cm. high with more or less globular bodies and short rims from vertical to slightly outflaring (A, C, D, I). Next most frequent are carinated bowls up to 30 cm. or more across (F), and cylindrical vessels from 14 to 22 cm. or more in height (B, G). A few compound bowls indicated by sherds appear to be as much as 25 cm. in diameter (E, H). Appendages absent.

DECORATION
Treatment: Arched punctates, done with thumbnail in most cases, with hollow cylinder pressed in at angle in others; pinching; incising.
Designs: Type most easily identified by from one to eight or nine rows of evenly spaced arched impressions around rim of vessels, except in one case where they are on shoulder of compound bowl (H); these rows of arches alternated with horizontal incised lines in most cases but free in others; impressions usually arched upward but occasionally downward. Vessel bodies plain (D, E, F, H), covered with vertical incising closely spaced (B, C), pinched impressions running in vertical rows (A, G), fingernail impressions placed end-to-end or overlapping to make spiraling lines (I), etc. Spiral designs repeated four times. Other bodies have grids of diagonal and horizontal lines like those of Dunkin Incised (Plate 18). Designs not smoothed over.

CULTURAL AFFILIATIONS
Exclusively an Alto Focus type.

DISTRIBUTION
Central parts of East Texas and northwestern Louisiana; extends as far west as Chupek Site near Waco. Occurs as trade ware in Wylie Focus in Dallas area.

ESTIMATED AGE
Some part of span 500-1000 A.D.

REFERENCES
Krieger, 1946, Fig. 19; Newell and Krieger, 1949, pp. 118-120 and Fig. 46.
WILDER ENGRAVED
(Plate 68)

PASTE
Temper: Fine clay-grit; sometimes no visible temper.
Texture: Compact, seldom crumbly.
Surface finish: Poorly smoothed to fairly well smoothed.

FORM
Wall thickness: 4 to 7 mm.
Lip: Rounded, rolled outward.
Base: Round, flat disk on ollas; on bottles, flat to convex.
Vessel shape and size: Mainly bottles and small jars. Some ollas (K).

DECORATION
Treatment: Engraving, excising, punctating.
Designs: Scrolls, repeated four times around vessel. Each scroll consists of two arms, one beginning at upper margin, other at lower margin. They circle into one another, sometimes not meeting at center but separated by a gap (E, F, J, K, M), at other times meeting at opposite sides of a small circle (D, H, L). This circle may be excised or cross-hatched or have a cross in it (D). Where the two scroll arms pass above and below this circle, they are widened considerably by excising (D, H, L). These swellings may occur even when there is no circle joining the two scroll arms (A-C, E, I, K). Sometimes the two arms that hook toward one another are plain single lines (J), ticked lines (M), or narrow cross-hatched bands (G, I). Punctated areas may appear around top of body as in J. Red pigment seldom occurs.

CULTURAL AFFILIATIONS
A Titus Focus type. These vessels were originally included in Ripley Engraved (Krieger, 1946, Figure 18) but have now been separated because of the peculiar scroll arms and the much smaller range of vessel forms. The Wilder type requires more research for more precise distinction from both Ripley Engraved (Plates 57-59) and Taylor Engraved (Plates 65, 66).

DISTRIBUTION
Same as Ripley Engraved. Specimen H from Belcher Site in Caddo Parish, northwest Louisiana, probably a trade piece from northeast Texas.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
None.
MISCELLANEOUS FULTON ASPECT UTILITY POTTERY

(Plate 69)

GENERAL NOTES

Plate 69 attempts to provide a bare indication of the variety of rough utility pottery which is to be found in northeast Texas in the foci of Fulton Aspect. Many hundreds of complete vessels and thousands of sherds collected in this area have not yet been analyzed by type, but others are described above (see: Belcher Rridged, Plate 6; Bullard Brushed, Plate 9; Cass Appliqued, Plate 11; Clements Brushed, Plate 12; Harleton Appliqued, Plate 28; Karnack Brushed-Incised, Plate 38; Killough Pinched, Plate 41; LaRue Neck Banded, Plate 42; McKinney Plain, Plate 43; Maydelle Incised, Plate 46; Military Road Incised, Plate 48; Nash Neck Banded, Plate 50; Pease Brushed-Incised, Plate 53. Some others, such as Cowhide Stamped and Foster Trailed-Incised, Plates 13 and 20, often have soot on the inside, indicating use for cooking, but are too well made to be classed as "rough" cooking ware).

The vessels shown are entirely of clay-grit temper, occasionally with bone added, as is the case with all utility of the Frankston, Titus, Allen, and Bossier Foci, and nearly all of that of Texarkana, Belcher, and Mid-Ouachita Foci. The remaining utility ware of the latter foci, and most of that of McCurtain and Glendora, is tempered with pulverized shell (see Plate 70, A-G). The techniques of incising, pinching, fingernail punctations, stick punctations, applique, and brushing are all found in various combinations, often two or three on the same vessel, so that classification into types is quite arbitrary—much more so than in the polished and engraved wares—and will generally depend upon whichever technique covers the greater part of the vessel surface or provides the dominant part of the design.

The associations are as follows: A, B, Frankston Focus; C, N, Hunt and Clements Sites, Cass County (see pages 225-227); D-K, Titus Focus; L, M, Texarkana Focus. These specimens do not, however, provide even a rough indication of the variety of styles to be found in these foci.

REFERENCES
None.
MISCELLANEOUS FULTON AND GIBSON ASPECT
UTILITY POTTERY

(Plate 70)

GENERAL NOTES

Specimens A-G illustrate selected utility vessels from Mid-Ouachita Focus, all shell-tempered except B, G, which are clay-grit tempered. Shell-tempered vessels are infrequent in this focus, the greater part of the utility ware consisting of the clay-tempered type Military Road Incised (Plate 48). These vessels are shown for contrast with those in Plate 69, which see for remarks on Fulton Aspect utility pottery in general.

Specimens H-N represent a few selected examples of utility ware from Haley Focus of Gibson Aspect which have not been formally analyzed by type. No shell-tempered pottery is known in this Aspect, it being entirely tempered with coarse clay-grit, to which pulverized bone was sometimes added. While specimens H-N show some consistency in being decorated either with punctates or vertical incised lines, not enough vessels are available for establishing new types. For types now recognized in various foci of Gibson Aspect, see those described above: Canton Incised, Plate 10; Dunkin Incised, Plate 18; Haley Complicated Incised, Plate 27; Kiam Incised, Plate 40; and the jars, at least, included in Weches Fingernail Impressed, Plate 67. On the whole, there is much less variety of decorative technique in Gibson Aspect than in Fulton Aspect; and there is greater tendency to use only one technique on each vessel, so that they are more easily classified.

REFERENCES

None.
BELCHER PLAIN

PASTE

Temper: Clay-grit, to which white particles (tuff?) sometimes added.

Texture: Granular but firm, breaks with sharp edges.

Color: Exteriors gray, yellow, buff, orange, brown, and greenish-gray; considerable fire-mottling. Cores black.

Surface finish: Exteriors and interiors both poorly smoothed.

FORM

Wall thickness: 5 to 10 mm., average 7 mm.

Lip: Rounded, slightly thickened with strip added to outer edge.

Base: Convex or slightly flattened; vessels do not stand up well.

Vessel shape and size: Type name now restricted to a series of large ollas with globular bodies and small mouths with vertical rims. Greatest diameter at middle or somewhat below; there may be a slightly angular turn to the wall at point of greatest diameter. The shape of these ollas is the same as in the decorated types described above, as follows: Clements Brushed, Plate 12, B; Ripley Engraved, Plate 59, K, L; Wilder Engraved, Plate 68, K. Complete vessels from Belcher Site, Louisiana, measure 30 to 40 cm. high and 35 to 40 cm. in maximum diameter. The bodies are usually deformed in the lower parts, as though the makers were unable to prevent slumping due to the shape and weight of the clay before firing.

DECORATION

Treatment: A little incising.

Designs: Bodies completely plain and constitute nearly the entire vessel surface. A few irregularly incised lines appear on neck of a few specimens. Shades of color produced by fire-mottling attractive and may have been done intentionally.

CULTURAL AFFILIATIONS

Large plain ollas appear to be restricted to Belcher Focus as a resident type. The only known exception is a small specimen shown by Harrington (1920, Plate XCl, B) from Site 11 at Ozan in Hempstead County, Arkansas. There must
be an intimate connection with the decorated ollas mentioned above in the Titus Focus and Clements Site, where there are no plain ollas, so far as known, while conversely, Belcher Focus components have no known decorated ones. All of these together constitute a unique vessel form in Caddoan archeology, and they are not found elsewhere in the entire Eastern United States. The form is very similar to a common one in the Puebloan culture of the Southwest United States, which, together with other ceramic parallels between Caddoan and Puebloan culture, has been discussed by Krieger (1946, pp. 235-247 and Plate 32). The mouths are just large enough to insert a hand; the ollas may have been for food storage.

**DISTRIBUTION**

Known as an established type only at Belcher Site, Caddo Parish, Louisiana, in Belcher Focus component (two upper levels).

**ESTIMATED AGE**

1200-1500 A.D. or part thereof.

**REFERENCES**

First described as "subtype C" of "Type 4, Belcher Plain" (Webb and Dodd, 1941, p. 101 and Plate 17, No. 6). At that time, "Belcher Plain" was considered to include all plain vessels and sherds from the upper two levels at Belcher Site. Later, Webb restricted Belcher Plain to these ollas (Krieger, 1946, Fig. 18).

**BOWLES CREEK PLAIN**

**PASTE**

Temper: Clay-grit; occasionally bone particles added.

Texture: Variable, from rather fine to coarse, lumpy, but compact.

Color: Various shades of brown from light tan to dark, and reddish.

Surface finish: Bowls well smoothed but not polished; jars poorly smoothed on exterior, well smoothed on interior.

**FORM**

Wall thickness: 4 to 8 mm.

Lip: Rounded or somewhat flattened and flush with rim.

Base: Bowls have convex bottoms, jars flat disk bases.

Vessel shape and size: This type is a cross-section of all pottery at Davis Site, type site for Alto Focus. Proportionately, there was very little completely undecorated pottery.
in this site, but many of the decorated types (see Plates 14-18, 31, 34, 35, 40, 54, 67) had designs only on the rims and upper portions. For this reason no body sherds have been included in Bowles Creek Plain, because any single sherd might have come from the lower portions of a vessel that was decorated higher up. Bowles Creek Plain includes only those sherds large enough to show that the rim or upper portion of the vessel was completely plain, so that in all probability the entire vessel was undecorated. These sherds indicate the same vessel forms found in all the other Alto Focus types, so the type may best be visualized as consisting of the whole array of forms, of which only an occasional vessel, perhaps two or three out of a hundred, simply was left without any kind of decoration.

CULTURAL AFFILIATIONS

An Alto Focus Type.

DISTRIBUTION

Central part of East Texas and northwestern Louisiana.

ESTIMATED AGE

Some part of span 500-1000 A.D.

REFERENCES

Newell and Krieger, 1949, pp. 126-127 and Fig. 47, B-D.

DUREN NECK BANDED

PASTE

Temper: Clay-grit.

Texture: Very coarse and crumbly or friable; large clay-grit particles commonly visible on surface.

Color: Yellow-browns, bright red (fire-color only), shades of medium and reddish browns, often somewhat fire-mottled. Cores gray to black.

Surface finish: Interiors fairly well smoothed; exteriors rough or covered with fingernail punctates; rim coils pinched on with seams showing.

FORM

Wall thickness: 4 to 12 mm., average perhaps 8 mm. Usually thickest at shoulder and base, thinnest between these points.

Lip: Rounded and turned outward to overhang rim slightly.

Base: Thick, flat disk to which body wall attached.

Vessel shape and size: Jars the only form known, ranging in height from 14 to over 50 cm., the largest being of several
gallons capacity. Wide shoulder area, body tapered toward base rather than globular, rim vertical or slightly out-curving.

DECORATION

Treatment: Neck banding, fingernail punctating.

Designs: Corrugated effect produced on rims by crimping each coil down on preceding one, at regular intervals, in same manner as shown for type LaRue Neck Banded (Plate 42). This technique never shows on body below rim zone, although entire vessels of this and other types were made by coiling and each coil must have been added in the same manner. By not smoothing over these rim coils and crimps, and by crimping at regular intervals, a distinctly decorative effect was reached. Bodies were left entirely plain or were covered with irregularly spaced fingernail punctations or pinches. These body treatments provide an easy distinction between Duren Neck Banded and LaRue Neck Banded, the latter having bodies covered with vertical brushing in every known case; Duren also lacks handles.

CULTURAL AFFILIATIONS

An Alto Focus type. Undoubtedly the ancestor of LaRue Neck Banded, a common type of Frankston Focus (Plate 42), found in the same part of East Texas. The change from plain or fingernail-punctated bodies in the Duren type to brushed bodies in the LaRue type is a general one in the utility pottery types of Alto and Frankston Focus. The type Nash Neck Banded of Texarkana and McCurtain Focus (Plate 50) is related to Duren and LaRue in the basic technique of neck decoration, but the vessels are much smaller, four rim peaks and shell temper are common in it, and the crimping is notably better done, with thinner coils and finer indentations.

DISTRIBUTION

Found mainly at Davis Site, Cherokee County, with a few sherds in other Alto Focus components. Unknown in Louisiana components.

ESTIMATED AGE

Some part of span 500-1000 A.D.

REFERENCES

Krieger, 1946, Fig. 19; Newell and Krieger, 1949, pp. 120-123 and Figs. 40, 47.
HARDY INCISED

GENERAL NOTES

Some Caddoan pottery from Alto Focus was once classified as "Hardy Incised," a type long known in eastern Louisiana (Krieger, 1946, Fig. 19). The same Texas vessels were later included as possible variants of type Dunkin Incised as defined at the Davis Site by Newell and Krieger (1949, Figs. 41-43). They are now classified as a separate type, Kiam Incised (present Plate 40), as originally intended by Newell.

While there are some similarities in form and decoration between the Louisiana type Hardy Incised (for definition see Quimby, 1951, pp. 113-114 and Fig. 14), and the Alto Focus types Davis Incised and Kiam Incised (present Plates 17, 40), there are enough differences in paste, texture, form, and design to distinguish them. Hardy can be readily recognized by its exceedingly soft, fine-textured paste, which contrasts with the thick, coarse, lumpy, and friable paste of the two Alto Focus types. While Hardy occurs as bowls and jars alike, with only the rim or upper part decorated with horizontal lines (sometimes with a row of punctates below the last line), Kiam occurs only in the form of jars with rims encircled by parallel, horizontal lines, and bodies plain, covered with vertical incised lines, or pinched or punctated with fingernails (Plate 40). Davis Incised occurs in a wider variety of bowl shapes than does Hardy, and even includes bottles (Plate 17). Further comparisons are needed.

KEOTA CURVILINEAR INCISED

GENERAL NOTES

This name was improvised for certain vessels from Spiro and other sites of Spiro Focus in eastern Oklahoma (Krieger, 1946, Fig. 19). The polished-over incised designs on these vessels are very similar to those of Crockett Curvilinear Incised of Alto Focus (present Plates 14-16), and while the vessel shapes are also similar in some respects, the very common carinated bowl form of Alto Focus is missing in Oklahoma and western Arkansas.

It may be said that many of the vessels once called "Keota Curvilinear Incised" in Oklahoma and Arkansas actually belong to the type Crockett Curvilinear Incised, for they cannot be distinguished from the latter by design layout, vessel form, paste, or surface finish. On the other hand, there may be other vessels which only generally resemble Crockett but possess enough distinctive features to define another type (or types). This is a matter for future research. The name Keota no longer has any meaning and should be dropped.
SMITHPORT PLAIN

GENERAL NOTES

This type was first defined by Webb and Dodd (1941, pp. 103-104 and Plate 17, No. 4) in the two lower levels of the Belcher Site in Caddo Parish, Louisiana. It is now considered a trait of Haley Focus and has been recognized in collections from the Haley, Crenshaw, East, and other sites of this focus. It consists primarily of bottles very similar in shape and size to those included in Haley Engraved (present Plate 26, B, C, F), while sherds with similar paste may indicate other forms. About a dozen of the sherds originally reported by Webb and Dodd (1941) were coated with a bright red, soft red film. While the type occurs in the Red River valley at least as far upstream as the great bend, it has not been recognized yet in Texas.

WILKINSON PUNCTATED

GENERAL NOTES

This type was first defined by Ford and Willey (1940, pp. 50-51 and Fig. 15, D-F) in connection with the Crooks Site in central Louisiana, where it was believed to represent an intrusive element from the Caddoan area of northwestern Louisiana. It consisted of clay-grit tempered sherds on which were rows of fingernail punctations or pinches.

As the original specimens were body sherds and the accompanying rim decoration unknown, the type is no longer regarded as valid. The same fingernail punctations may be found on the bodies of utility jars in several Caddoan types: see Dunkin Incised (Plate 18), Kiam Incised (Plate 40), Weches Fingernail Impressed (Plate 67), and Duren Neck Banded (not illustrated, but described above). They also occur on rim or body, or both, of utility vessels in Fulton Aspect (Plate 69), but less often than in Gibson Aspect.
COASTAL POTTERY TYPES
GOOSE CREEK PLAIN
(Plate 71)

PASTE

Method of manufacture: Coiled.
Temper: Sand or sand combined with clay-grit; rarely, pulverized bone.
Texture: Fine to coarse, depending on size of either sand or clay-grit particles. Sandiest sherds feel like sandstone, particles loose on surface; in others the sand grains are imbedded in clay.
Color: Gray, brown, and gray-brown, mainly in dark shades ranging to nearly black; also reddish-brown, buff, tan, orange-brown, yellow. Much fire-mottling, so that several shades may occur on same vessel. Cores dark gray and brown to black.
Surface finish: Poorly smoothed and uneven both inside and outside, possibly indicating paddle-and-anvil method of finishing, at least in some cases. In others, marks of scraping and smoothing tools show on surfaces. Occasionally, interior deeply striated with parallel lines (I) or grid of crossed lines (H), possibly produced by smoothing interior with coarse grass.

FORM

Wall thickness: Range 3 to 10 mm., average about 5 mm.
Lip: Usually a rather sharp edge, but may be flat and flush with rim or rounded and turned outward slightly (K).
Base: Characterized by a round, thick knob to which vessel wall was attached, and which projected downward to form a conical bottom (A). The edges of these knobs, and sherds broken from them, show coiling technique was used. Flat or slightly convex bases also known.
Vessel shape and size: General absence of complete vessels, but largest sherds suggest three forms: (1) deep bowls with more or less hemispherical bodies; (2) cylindrical vessels; (3) vessels essentially cylindrical but curving inward gently between the middle and mouth (Wheat, 1953, Plate 31). The conical, knobbled base may occur on all three forms, but this is uncertain. The bowls range to 45 cm. in diameter, the cylindrical vessels to 25 cm. or more in height. Drilled holes sometimes appear just below the lip and may have been for suspension; others appear in pairs on either side of a crack (B, D) and must have been used to repair cracked vessels with cords or thongs.

DECORATION

Lip notching fairly common, as short incisions running at right angles or diagonally along outer edge, or in diagonals and crossed diagonals on top of flattened lip. A red wash was
applied to the exterior in rare cases; in others, the firing produced a rather bright red.

CULTURAL AFFILIATIONS

A Galveston Bay Focus type, the undecorated counterpart of Goose Creek Incised. Both types share occasional striation of the interior with the Rockport types (Plates 73) of the central Gulf Coast area in Texas. There appears to be no specific relationship to the Caddoan ceramic traditions farther inland; such traits as are shared with Caddoan wares (clay-grit temper, occasional red film) are of more general distribution in the Southeast United States than these complexes.

DISTRIBUTION

All around Galveston Bay as well as some distance inland and westward along coast; extent into Louisiana has not been investigated.

ESTIMATED AGE

Pre-European, but otherwise difficult to determine. Wheat (1953, Plate 33, K) illustrates a trade sherd of type Teche-funcet Stamped from Louisiana in an excavated site in the Addicks Reservoir basin west of Houston; if this dates the Goose Creek pottery types, they may have been in existence as early as 500 A.D. The conical bottoms are mindful of certain Woodland potteries of the Eastern United States which could date before the time of Christ. On the other hand, this ware may be a survival into late pre-Columbian times, made by the Attakapan Indian groups who inhabited this part of Texas.

REFERENCES


GOOSE CREEK INCISED

(Plate 72)

PASTE, FORM

See Goose Creek Plain.

DECORATION

Treatment: Incising, punctating.

Designs: In all known cases, decoration is confined to rim zone. Most common design consists of from one to six parallel horizontal lines just below lip, beneath which a single row of punctates occurs occasionally (F, H, I, K, R, S). Pendent triangles filled with diagonal lines or punctates may also occur below the bottom line (B, E, G, J, M, N). Other elements include diagonal ladders (A), ticking on border lines (C), crossed diagonals (D, F), ticked diagonals between upper and lower border lines (L), and diamonds or
squares filled with cross-hatching (O, T). The widely spaced vertical lines on a vessel body (Q) probably represent an intrusive element. The lines and punctates are, in general, quite finely executed.

CULTURAL AFFILIATIONS

A Galveston Bay Focus type (see Goose Creek Plain for further remarks). The use of simple horizontal lines encircling the vessel rim, sometimes with a row of punctates below the bottom line, is found in the types Coles Creek Incised and Hardy Incised in central and eastern Louisiana. For this reason, Goose Creek Incised (and Goose Creek Plain) may have existed contemporaneously with the Troyville, Coles Creek, and Plaquemine periods of the lower Mississippi Valley, although the Galveston Bay pottery is very unlike the latter in most features.

DISTRIBUTION, ESTIMATED AGE

Same as Goose Creek Plain.

REFERENCES


ROCKPORT BLACK-ON-GRAY

(Plate 73)

PASTE

Method of manufacture: Probably coiled.
Temper: Most sherds have a fine sandy appearance with no visible added tempering material.
Texture: Generally fine, compact, homogeneous; hard, does not crumble or break easily.
Color: Predominantly dark gray and brown; light gray, buff, reddish-brown, yellowish-brown also occur. Cores dark brown to black. Areas of soot may darken parts of surface. Some fire-mottling.
Surface finish: Poorly smoothed, uneven, to fairly well smoothed. Interiors sometimes deeply striated (F', K, P), perhaps in scraping with coarse grass or twigs.

FORM

Wall thickness: Extreme range 1.5 to 7 mm., 2 to 4 mm. being common near Gulf shores while farther inland the walls are thicker.
Lip: Rounded or flat, often notched or crenelated (Potter, 1930, Plates 7, Nos. 5–10 and 9, No. 17).
Base: Little data; some convex, others possibly conical.
Vessel shape and size: Potter (1930, Plates 8, 9) illustrates bottle necks, hemispherical bowl, and gourd-like ollas; probably similar bowls are most common shape. Plate 73, D, S are rim sherds from wide-mouthed jars; J is bottle neck; C, N, R, T are bowl rims (N, R, interior views; C, T,
exterior). Handles very rare on coast, more common farther inland. Holes appear, either for suspension or for repairing cracks.

DECORATION

Treatment: Painting with asphaltum; occasional punctating; rarely, red wash.

Designs: Narrow squiggles or bands (A, B, E, J, T), usually running vertically on bowl rims and bottle spouts, sometimes alternated with vertical rows of punctates (Potter, 1930, Plate 8, Nos. 11-15). Also broader meandering or zigzag bands (C, D, F, G, L, M) and random streaks (H, R); large dots (V, W) which may be arranged in vertical rows around upper parts of ollas (Potter, 1930, Plate 9, No. 16). A narrow band may cover lip, extending down sides a short distance (S), or a wide band may encircle vessel on inside (N) or outside of rim. Some interiors are almost covered with asphaltum, probably to waterproof them (U). Other smears lie alongside of and partly over broken edges (I, Q), indicating attempts to waterproof cracked vessels. In rare cases, a red wash covered at least part of the exterior surface before the asphaltum lines were applied, giving a polychrome effect (F, L).

CULTURAL AFFILIATIONS

A Rockport Focus type, closely linked with Rockport Plain and Rockport Incised, the three types constituting a ware which contrasts strongly with all other wares in Texas. As yet, the origin of this ware has not been traced to any particular source in other regions—that is, to other culture complexes in the Southeast or Southwest United States, or Middle America. The deeply striated interiors of some vessels are quite like those of Goose Creek Plain and Goose Creek Incised (Plate 71, H, I), but in other respects these types are quite unlike.

DISTRIBUTION

Central portion of Texas Gulf Coast, particularly around Baffin, Corpus Christi, Aransas, Copano, San Antonio, and Matagorda Bays, and extending inland as far as Goliad, where two missions and a presidio were established in the middle 18th century.

ESTIMATED AGE

From an unknown date prior to 1400 A. D. until at least as late as 1750, perhaps after 1800. At Mission Espiritu Santo, established in 1749 at Goliad, Texas, there are not only sherds of this type which must have been carried inland from the coastal bays, but a thicker pottery made at the mission and decorated with asphaltum in exactly the same manner as on the coast. The ware also agrees closely with pottery made by the Karankawa in the 19th century, as described by Gatschet. Probably several coastal tribes, such as Mariames, Copano, Cojane, etc., made this pottery as well as the so-called “Karankawa”.

REFERENCES

Potter, 1930 (describes techniques and illustrates designs under “Class III”); Martin, 1931; Campbell, 1947.
ROCKPORT PLAIN

PASTE, FORM

Same as Rockport Black-on-Gray. The shell temper described by Potter (1930) for his “Classes I and II” is really pulverized bone, so far as the authors have been able to determine; angular chunks of bone appear scattered in some sherds, but it is neither common nor evenly distributed in individual sherds.

DECORATION

Aside from some notched and crenelated lips, the vessels are plain. The type is based only on rim sherds large enough to indicate that entire vessels were undecorated; the body sherds alone could not be distinguished from the undecorated parts of Rockport-Black-on-Gray and Rockport Incised vessels.

CULTURAL AFFILIATIONS

A Rockport Focus type, somewhat similar to Goose Creek Plain of Galveston Bay Focus (Plate 71), but thinner, with much finer and more compact paste, harder (with sharper edges where broken), and vessel forms on the whole probably quite distinct.

DISTRIBUTION, ESTIMATED AGE, REFERENCES

Same as Rockport Black-on-gray.

ROCKPORT INCISED

PASTE, FORM

Essentially the same as Rockport Black-on-gray but somewhat thicker. For remark on “shell temper” reported by Potter, see Rockport Plain.

DECORATION

Treatment: Incising.

Designs: Simple geometric elements in narrow zone around rim: horizontal or diagonal lines, crossed lines, triangles, etc. (examples in Potter, 1930, Plate 7, Nos. 1-4). They compare with those of Goose Creek Incised (present Plate 72) except that punctates were seldom, if ever, used.

CULTURAL AFFILIATIONS

A Rockport Focus type, closely allied to Rockport Black-on-gray and Rockport Plain, but much less common than either of them. Undecorated body sherds cannot be distinguished from those of the other two types in the present state of analysis. Detailed comparisons have not been made between the design elements of Rockport Incised and Goose Creek Incised but it appears likely that those of the former were derived from the latter by a diffusion of ideas along the coastal plain; neither has any close relative elsewhere, so far as known.

DISTRIBUTION, ESTIMATED AGE, REFERENCES

Same as Rockport Black-on-gray.
CENTRAL TEXAS POTTERY TYPES

LEON PLAIN

(Plate 74, A-F, H, K-M)

PASTE

Method of Manufacture: Coiled.

Temper: Fine clay-grit and pulverized bone, the latter occurring perhaps more commonly than in any other type in Texas. The bone was very finely ground and often shows on surfaces (K, M).

Texture: Rather fine, very compact, tendency to break with sharp edges.

Color: Shades of brown, gray-brown, and gray from very light to very dark. A few sherds are reddish brown to bright red from firing only, not filmed. Fire-mottling not common. Cores darker than surfaces, brown to black.

Surface finish: Ranges from poorly smoothed to somewhat polished.

FORM

Wall thickness: 3 to 8 mm.

Lip: Rounded and flush with rim or turned outward slightly.

Base: Flat and same thickness as side wall in some cases, possibly convex and somewhat thickened in others; very few found.

Vessel shape and size: Sherds indicate more or less hemispherical bowls, and jars with high vertical rims, bodies bulging outward only slightly below rim zone (A, H, K; K is largest part of vessel for this type yet examined). A single round knob below the rim (B) and two loop handles in same position (C, D) are only examples of appendages which may belong to this type. Holes for suspension or crack repair occur rarely (H).

DECORATION

None.

CULTURAL AFFILIATIONS

Associated with Central Texas Aspect, and possibly with Tonkawa Indians.

DISTRIBUTION

Central part of Texas, particularly in drainage basin of Colorado River and tributaries, but also extending westward
at least as far as Uvalde and San Angelo. Very scarce on most sites, often only a half dozen such sherds being present; other sites have produced 100 or more, but not enough to restore individual vessels. Trade pottery from Caddoan units of East Texas, particularly Frankston Focus, commonly occur on same sites as Leon Plain.

**ESTIMATED AGE**

May have existed for several centuries prior to 18th century; not proved to have been present in historic times but this is possible.

**REFERENCES**


**MISCELLANEOUS**

(Plate 74, G, I-J, N)

**GENERAL NOTES**

A few Central Texas potsherds have been designated “Doss Red Ware” by Kelley (1947, p. 123), who does not describe them except as “thin potsherds with sand and bone temper, and a red washed semi-polished surface”. The pottery we have designated Leon Plain does not have a wash or film, but some sherds are bright red as a result of firing temperatures. On the other hand, certain sherds which do have faint remnants of a red wash on a cream or pale yellow background (G), are not tempered with sand or bone, but with abundant small particles of a white mineral substance, probably volcanic in origin. Almost identical sherds, even including a faint red wash, are found in the Huastecan archeological area on the east coast of Mexico, where they belong to Period V (Buena Vista Period: see Du Solier, Krieger, and Griffin, 1947). Thus, if the “Doss Red Ware” should be proved to be trade ware from the Huastecan area, a date of about 1000 to 1100 A. D. would be indicated.

Brushed utility ware occurs in Central Texas, mainly as trade pottery from Frankston Focus in East Texas. Occasionally, however, brushed pottery appears to have been made in the central area. Specimens I, I' are parts of one such vessel, a jar with high rim brushed vertically, body brushed horizontally and diagonally, and a row of fingernail punctates at the rim-body junction. Specimen J is very faintly brushed. Incised decoration is very rare on pottery apparently made in this area; N is an example which in paste and temper is similar to Leon Plain.
NORTH-CENTRAL TEXAS POTTERY TYPES

NOCONA PLAIN

PASTE
Method of manufacture: Probably coiled but does not break regularly in horizontal direction.
Temper: Usually abundantly tempered with crushed mussel shells; in rare cases, no temper visible.
Texture: Fairly compact to crumbly; shell particles occasionally leached out, leaving porous paste.
Color: Mainly shades of brown, gray-brown, reddish-brown, orange-brown, etc., but ranging from dark cream to nearly black. Not much fire-mottling; cores about same as surface or darker.
Surface finish: Poorly smoothed and uneven, suggesting possibly use of paddle-and-anvil, but some exterior surfaces fairly smooth, satiny.

FORM
Wall thickness: 4 to 8 mm.
Lip: Usually rounded and flush with rim or turned outward slightly; may also be a quite sharp edge, and in rare cases, flat (Krieger, 1946, Fig. 5, shows rim profiles).
Base: Rounded bottoms, merging with side walls and same thickness.
Vessel shape and size: Almost exclusively jars, so far as can be determined from sherds; more or less hemispherical bowls also suggested. Jar rims may meet body at definite angle or merge gradually; rims 1 to 4 cm. high, bodies unknown; mouth diameters probably more or less equal to maximum body diameters.

DECORATION
Treatment: Usually none, but small amount of applique, punctating, incising may occur.
Designs: A row of small applique nodes may occur around vessel at rim-body junction; rarely, scattered fingernail punctates or striations appear on body or rim; in a few cases, shallow depressions made with a very blunt tool.

CULTURAL AFFILIATIONS
A Henrietta Focus type, also occurring in Wylie Focus farther east, but difficult to determine whether made by Wylie Focus people or obtained by trade (Caddoan pottery from East Texas also occurs in Wylie Focus, where it is rather clearly all trade ware). Similar pottery occurs in south-central Oklahoma in the Bryan Focus (Bell and Baerreis, 1951), where applique nodes and fillets, as well as handles, are more commonly found.

DISTRIBUTION
North-central Texas, extending from near the junction of Red River with the Panhandle boundary eastward down the Red River valley to Fannin and perhaps Lamar County, and southward into the upper drainage systems of the Brazos and Trinity Rivers.

ESTIMATED AGE
1200-1500 A.D.

REFERENCES
Krieger, 1946, pp. 109-111, Fig. 5 and Plates 4, 5.
ANTELOPE CREEK FOCUS POTTERY TYPES
BORGER CORDMARKED
(Plates 75, 76)

PASTE

Method of manufacture: Undetermined.
Temper: Crushed quartz, sand, mica, and occasionally small bone chunks; usually two or more of these substances used in same vessel.
Texture: Usually quite compact and hard, broken edges sharp, but thicker vessels may be friable to crumbly.
Color: Darker shades of gray and brown most usual, but some are orange-brown and others nearly black. A light red wash occasionally occurs on interior. Cores dark gray to black. Soot and grease stains common.
Surface finish: Interiors poorly to fairly well smoothed but bumpy; exteriors covered with cordmarking.

FORM

Wall thickness: Extreme range 2 to 12 mm., but many are quite thin, from 2 to 4 mm., with tendency for vessel to be thinner toward bottom than at top and in rim zone.
Lip: Rounded or flat and flush with rim.
Base: Convex bottoms with no distinguishable base.
Vessel shape and size: Only form yet recognized is that of jars, but considerable variation in proportions of mouth and body diameters, and bodies may be from globular (Plates 75, A, B, 76, C, D) to rather elongate (Plate 76, B). Rims generally meet body at definite angle and slope inward or outward slightly, or stand vertical; in some cases, body and rim merge in gentle curve (Plate 76, A, D) with mouth considerably smaller in diameter than body. Vessel size is on the whole rather uniform, restored specimens ranging between 20 and 30 cm. in total height with rims 3 to 6 cm. high; bodies range from 23 to 31 cm. in maximum diameter, mouths 14 to 22 cm. Lugs and handles apparently absent.

DECORATION

Treatment: Cord impressions; rarely, incising and fingernail punctating.
Designs: Impressions of fine cords cover entire exterior of vessels. almost always placed vertically on body and rim
alike, but occasionally in grids that tend to cross one another (Plate 75, A, rather definitely, B, C, partially). In some instances, cordmarking on rim partly smoothed over and single deeply incised line or row of fingernail punctates encircles vessel at rim-body juncture. Lips may be deeply notched on outer edge.

CULTURAL AFFILIATIONS

An Antelope Creek Focus type, related to Stamper Cordmarked of Optima Focus in Oklahoma Panhandle (Watson, 1950). Also bears a general relationship to scores of types of cordmarked pottery in Great Plains and Woodland areas of United States and Canada. While probably more or less coeval with Upper Republican culture cordmarked wares, Borger lacks the specialized rim and lip treatments, incising, etc., which distinguish the former.

DISTRIBUTION

Canadian River drainage system in upper Texas Panhandle and lower plains along eastern side of Panhandle, probably extending into western Oklahoma; known as far east as Young County on upper Brazos River.

ESTIMATED AGE

First estimated at 1300-1450 A. D. because of association with Puebloan trade pottery from New Mexico; now estimated at 1100 or 1200 to 1450 A. D.

REFERENCES

TRANS-PECOS POTTERY TYPES
(NON-PUEBLOAN)
CONCHOS RED-ON-BROWN

GENERAL NOTES:
Little data available. Sherds indicate a thick, rather crudely painted pottery with broad lines drawn in a thin, dull red paint on a brownish-buff surface. It has been found in extreme western Texas in the Rio Grande valley and adjacent parts of Chihuahua. It was made in late prehistoric and early historic times.

REFERENCES:
Sayles, 1936b, p. 55; Kelley, Campbell, and Lehmer, 1940; Kelley, 1949.

CONCHOS PLAIN
CAPOTE RED-ON-BROWN
PALOMA RED-ON-GRAY

These types have been mentioned by Kelley in connection with foci of the Bravo Valley Aspect (see Trans-Pecos Texas Area), but not described.

PUEBLOAN POTTERY TYPES OCCURRING IN TEXAS*

As it has not been possible to assemble adequate illustrations of these types, most of which appear to have been carried into Texas as trade pottery, the reader is referred to the following published references:

ALMA PLAIN: Haury, 1936; Hawley, 1950.
AGUA FRIO "A" (GLAZE-ON-RED): Mera, 1933; Hawley, 1950.
ARENAL GLAZE POLYCHROME: Mera, 1933; Hawley, 1950.

* The term "Puebloan" is here used in the broad sense, following Erik K. Reed. It includes the Anasazi and Mogollon traditions, to which we have added the comparable developments of the Chihuahua culture.
BABICORA POLYCHROME: Amsden, 1928; Carey, 1931; Brand, 1935; Sayles, 1936b; Hawley, 1950.

BROAD-LINE RED-ON-TERRACOTTA: Lehmer, 1948, p. 79 (mentioned but not described).

CHUPADERO BLACK-ON-WHITE: Mera, 1931; Stallings, 1931; Cosgrove, 1932; Brand, 1935; Kidder and Shepard, 1936; Hawley, 1950.

CIENEGUILLA GLAZE “A” (GLAZE-ON-YELLOW): Hawley, 1950.

EL PASO BROWN: Lehmer, 1948.

EL PASO POLYCHROME: Alves, 1931; Stallings, 1931, 1932; Cosgrove, 1932; Brand, 1935; Lehmer, 1948; Hawley, 1950.

GILA POLYCHROME: Kidder, 1924; Schmidt, 1928; Hawley, 1929, 1950.

HESHOTAUTHLA POLYCHROME: Kidder and Shepard, 1936; Hawley, 1950.

HOUCK POLYCHROME: Roberts, 1932; Mera, 1934; Hawley, 1950.

LINCOLN BLACK-ON-RED: Mera and Stallings, 1931; Hawley, 1950.

MIMBRES CLASSIC BLACK-ON-WHITE: Kidder, 1924; Nesbitt, 1931; Cosgrove, 1932; Gladwin, 1934; Hawley, 1950.

MIMBRES CORRUGATED: Cosgrove, 1932; Gladwin, 1934; Hawley, 1950.

PLAYAS RED INCISED: Sayles, 1936b; Hawley, 1950.

RAMOS POLYCHROME: Sayles, 1936b; Hawley, 1950.

SAN FRANCISCO RED: Haury, 1936; Hawley, 1950.

ST. JOHNS POLYCHROME: Kidder, 1924; Hawley, 1950.

THREE RIVERS RED-ON-TERRACOTTA: Mera and Stallings, 1931; Nesbitt, 1931; Cosgrove, 1932; Hawley, 1931, 1950.

TUSAYAN POLYCHROME: Kidder, 1924; Hargrave, 1932; Hawley, 1950.

VILLA AHUMADA POLYCHROME: Brand, 1935; Sayles, 1936b; Hawley, 1950.
SPEAR POINT TYPES

ALMAGRE POINTS

(Plate 77)

DESCRIPTION

Outline: Broad triangular to leaf-shaped blade with edges fairly straight in some cases (J, N, P) but usually convex. Chipping very crude and one edge may be straighter than other (E, F, K). Shoulders vary from weak to wide and right-angular; no good barbs. Stems contracting, sometimes pointed (I, M) and sometimes approaching parallel edges (L). Bases convex, concave, pointed, but seldom straight because of crude workmanship. Usually thick and heavy; might be considered as unfinished examples of types such as Gary (Plate 94) and Langtry (Plate 98) but distribution distinct from both.

Dimensions: Total length 6 to 10 cm., average 7 or 8 cm. Maximum width 3 to 5 cm.; thickness 0.5 to 1.5 cm. While thinnest and smallest examples are well within range of "dart points" as described in other types herein, the largest and thickest ones appear far too heavy for such function and would have served better as spear or lance points. If so, it is interesting to note that there are only two such "spear" types in Texas, the other being the Pogo points of northeast Texas (Plate 78).

CULTURAL AFFILIATIONS

In Texas the distribution is about same as Langtry and Shumla points (Plates 98, 119), characteristic of Pecos River Focus and also occurring as minor types in Falcón Focus, but whereas the latter two types do not extend far into north-eastern Mexico, the Almagre type continues as far south as southern Tamaulipas (Information from MacNeish). An ancient connection with the Gary type of East Texas seems possible, but if so this basic form was never used to any extent in the large intervening area of Central Texas; both Gary and Almagre points are exceedingly rare there and the few known specimens appear to be intrusive from both east and west, as seen in the grades of flint used.

DISTRIBUTION

See paragraph above.

ESTIMATED AGE

May have appeared earliest in southern Tamaulipas, some thousands of years before Christ, and lasted longest in Pecos River Focus, until perhaps 500 A. D. or later. In Falcón Reservoir area, lower Rio Grande, type apparently associated with middle post-glacial Rosita Terrace, roughly between 3000 B. C. and time of Christ.

REFERENCES

Named by R. S. MacNeish, manuscript in preparation on archeology of southern Tamaulipas.
POGO POINTS
(Plate 78)

DESCRIPTION

Outline: Large triangular to leaf-shaped blade with considerable variation in edges from concave to straight and convex. Shoulders vary from small (B, C) to square (G, I, K, L) and well barbed (E, H, J). Stem slightly to strongly contracting in some cases, parallel-edged in others. Base straight to convex.

Dimensions: Total length varies from about 8 to 15 cm. Stem \( \frac{1}{4} \) to \( \frac{1}{7} \) of total length. Maximum width 4 to 6 or 7 cm., usually across shoulders but may be farther forward (E). Pogo points appear much too large for use on atlatl darts, for in addition to large dimensions they are thick and heavy; it is supposed they were used on spears or lances. Perhaps more than one type is indicated, for some may be nothing more than very large Gary points (A-C, K).

CULTURAL AFFILIATIONS

Some found on non-pottery sites and presumed to belong to East Texas Aspect of Archaic Stage. Others occur on pottery sites which appear to belong exclusively to one or another of the Caddoan foci, from which it is suspected that the type may have been made until historic times, or nearly so. Many of the specimens are made of novaculite, a material found in western Arkansas and eastern Oklahoma; others are ferruginous sandstone, flint, or chert.

DISTRIBUTION

Occurs sporadically in northeast Texas, never common on any one site. Also occurs in adjacent parts of Louisiana, Arkansas, and Oklahoma, and perhaps more widely; no distribution study has been made.

ESTIMATED AGE

Possibly from some time before Christ to early European times.

REFERENCES.

None.
DART POINT TYPES

ABASOLO POINTS

(Plate 79)

DESCRIPTION

Outline: Triangular to leaf-shaped blade with straight to slightly convex edges. Base is weakly convex to well rounded, almost semicircular, which is chief distinction from closely related Tortugas points (Plate 120). Blade often beveled, either along right or left edge of each face; in some cases the edges are not so much beveled as steeply chipped on both edges of one or both faces. Base may be thinned to facilitate hafting.

Dimensions: Length generally about 4 to 6 cm. but may range as high as 8 cm. Width generally 2 to 3 cm. but may range as high as 4.5 or 5 cm. Very similar to Catán points (Plate 84) but distinctly larger. Also similar to Desmuke points (Plate 87) but base rounded rather than having converging edges.

CULTURAL AFFILIATIONS

One of principal types (with Tortugas points) of Falcón Focus in southwest Texas, continuing southward to southern Tamaulipas and northern and eastern Nuevo León in Mexico. Going northward into Texas, it appears in Pecos River Focus, but only sporadically elsewhere, as in the Aransas Focus on the central Gulf coast, Edwards Plateau Aspect, and possibly the East Texas Aspect.

DISTRIBUTION

Most common in Rio Grande valley below Laredo and continuing into Tamaulipas, Mexico. Becomes progressively less frequent eastward along Gulf coast and northward into Central Texas and Pecos River mouth, but may be expected to occur occasionally in all parts of Texas except extreme north and Panhandle.

ESTIMATED AGE

Began between 5000 and 3000 B. C. and survived until perhaps 500 A. D. in most of distribution area, but apparently survived until 18th century along lower Rio Grande. Always in pre-ceramic cultural association, so far as known.

REFERENCES

Named by R. S. MacNeish, manuscript in preparation on archaeology of southern Tamaulipas.
ANGOSTURA POINTS
(Plate 80)

DESCRIPTION

Outline: Basically a narrow leaf shape with convex edges and base considerably narrower than in other early, lanceolate forms. In many cases, perhaps due to excessive grinding of proximal (lower) edges, there is a distinct inward curve below the mid-section (B–D, F, H, V, W). In other cases, there is a very faint shoulder below which the smoothed stem edges are quite straight as they converge toward the base (L, O–R, X). The broadest part is usually approximately at mid-section but may be slightly above or below; rarely, it is well toward the tip (Y, Z) or near the base (AA). The Angostura type is not known to include beveled edges, but specimens K–O have been included in Plate 80 to show how closely some beveled specimens resemble the unbeveled ones. As the exact association of such examples is unknown, it is not known whether they are contemporaneous with the unbeveled points or are later, rechipped, and of a distinct type. The situation is parallel to that of unbeveled Plainview points (Plate 116) and beveled Meserve points (Plate 104).

Dimensions: Texas specimens range in length from about 5 to 10.5 cm., in maximum width from 1.8 to 4.2 cm., and in base width from about 1.2 to 1.8 cm. The bases are thus distinctly narrower than those of Plainview points although the midsections are of about equal width if the largest examples (W, X, BB) are omitted.

CULTURAL AFFILIATIONS

Undefined. In general, such artifacts are early post-glacial, about same age and association as Plainview, Scottsbluff, Eden, and Meserve points.

DISTRIBUTION

Great Plains, from Central Texas northward probably into Canada.

ESTIMATED AGE

6000 to 4000 B.C., perhaps surviving later in Central Texas.

REFERENCES

First described by Hughes (1949) as Long points at the Long Site in Angostura Reservoir basin in South Dakota. Now generally referred to as Angostura points. Plate 80 examined by Hughes, who accepts all specimens as of this type except beveled ones (K–O), and Y. Present description is for Texas specimens; a complete survey of type throughout Great Plains is needed.

BAIRD BEVELED BLADE POINTS

See Tortugas Points (Plate 120).
BULVERDE POINTS
(Plate 81)

DESCRIPTION

Outline: Blade usually triangular with straight to slightly convex edges, but occasionally strongly convex to leaf-shaped. Shoulders sometimes squared (I, J, L, N, P, U, W) but usually have short barbs. In a few cases, barbs extend nearly to base of stem (S, X, Y), possibly indicating separate type although barbs of all lengths form a continuous gradation around fairly uniform stem shape. Stem usually rectangular or slightly contracting (C, F, L, M) and characterized by wedge shape; that is, from shoulder area, stem is thinned evenly to very sharp edge at base, with stem edges finely chipped. Base usually straight, may be very slightly concave or convex.

Dimensions: Total length ranges from about 4.5 to 9 cm., average about 6 cm. Stem usually 1/6 to 1/4 total length. Stem width fairly uniform at 1.5 to 2 cm.

CULTURAL AFFILIATIONS

Primarily an Edwards Plateau Aspect type, occurring less frequently in adjoining pre-ceramic complexes from Pecos River Focus to East Texas Aspect and Aransas Focus on coast. Closely related to Carrollton points (Plate 82) but lacks stem smoothing of latter type. Occurs in association with pottery in Alto Focus of Gibson Aspect in East Texas. Also similar to Travis points (Plate 121) except for more prominent shoulders and barbs, and wedge-stem, lacking in Travis type. When slightly concave bases occur (I, O, V), Bulverde type tends to approach Pedernales type (Plates 113-115).

DISTRIBUTION

Common in Central Texas, less so in adjoining areas.

ESTIMATED AGE

3000 B. C. to 500 or 1000 A. D.

REFERENCES

Kelley, 1947b, Plate 14, J; Newell and Krieger, 1949, p. 170 and Figure 59, L-Q; Miller and Jelks, 1952, p. 176 and Plate 59, No. 8; Bell and Hall, 1953, p. 9 and Plate 4. “Strawn Stemmed” (Kelley, 1947b, Plate 14, C) would probably be partly included in the Bulverde type as here defined.
CARROLLTON POINTS
(Plate 82, A-L)

DESCRIPTION

Outline: Triangular blade with prominent shoulders, squared or barbed; blade edges straight to slightly convex. Stem roughly rectangular, base straight to slightly convex. Stem edges, and sometimes base, commonly smoothed.

Dimensions: Total length ranges from about 3 to 6 cm., but shortest specimens (A-C) probably reworked after tips shattered. Stem ¼ to nearly ½ total length. Maximum width across shoulders 2.5 to 4 cm.

CULTURAL AFFILIATIONS

Reported as major type in Carrollton Focus of Trinity Aspect, Archaic Stage. Occurs as minor type in East Texas Aspect of Archaic Stage. Related to Bulverde points of Edwards Plateau Aspect (Plate 81), but much less variation in form, especially barbs, workmanship generally crude, stems not wedge-shaped in longitudinal section, and Bulverde type lacks smoothing of stem edges and base.

DISTRIBUTION

Center of distribution appears to be in Dallas area, near junction of East Fork and Trinity River, with frequency decreasing toward northeast Texas.

ESTIMATED AGE

2000 to 1000 B. C. (Crook and Harris, 1952).

REFERENCES

Crook and Harris, 1952; 1954a, p. 3, Plate 1, Nos. 1-4, who call the type “Carrollton Stemmed".
CASTROVILLE POINTS
(Plate 83)

DESCRIPTION

Outline: Large triangular blade with edges often quite straight, but sometimes slightly convex (D, I, J, L, O, S), concave (B, K, P), or recurved (C, G, O). Shoulders occasionally small (A, C, E), but strong barbs common. Barbs grade from long, narrow (D, F, G, H, J) to massive with tips in line with stem base (L-N, Q-T). In latter cases, artifact probably blocked out first as large triangle with convex base, then notches cut inward from base. One barb often longer than other. Stems very broad and usually expand with rather straight edges; they may also be nearly parallel-edged (B, D, E, K, P). Bases straight to convex. The broad stems and general straightness of both stem and blade edges usually form an easily recognized combination.

Dimensions: Total length about 5 to 9 or 10 cm., average about 7 cm. Width across shoulders or barbs ranges from 3 to 6 cm. Maximum stem width ranges from 2.4 to 3.6 cm. Stem length usually ¼ to ½ total length.

CULTURAL AFFILIATIONS

A major type of Edwards Plateau Aspect, Archaic Stage. Closely associated with Williams points (Plate 124) but distinguished by greater width and angularity of stem, and larger barbs; also similarities with Lange points (Plate 97).

DISTRIBUTION

Common in Central Texas, decreasing toward North-Central area and toward central coast.

ESTIMATED AGE

4000 B. C. to 1000 A. D. or greater part thereof.

REFERENCES

Kelley, 1947b (not illustrated); Miller and Jelks, 1952, p. 176 and Plate 23, No. 6 (Plate 23, No. 7 would now be classified as a Lange point, however). Bell and Hall, 1953, report this type as “common throughout Oklahoma, especially in eastern section of state,” but the examples they illustrate look like Williams points.
CATAN POINTS
(Plate 84)

DESCRIPTION

Outline: Same as Abasolo points (Plate 79) and similarly usually beveled on either right or left edge of both faces, occasionally on both edges of one or both faces.

Dimensions: Smaller than Abasolo points, ranging from 2 to 4 cm. in length and 1.5 to 2.5 cm. in width. In dimensions they could be classed as arrow points, but in thickness and use of bevels they are like other dart points. Between 4 and 4.5 cm. in length they overlap the smallest Abasolo points.

CULTURAL AFFILIATIONS

Linked with Matamoros points (Plate 103) as diagnostic types of Mier Focus, Archaic Stage, in Southwest Texas. The two types are small counterparts of the Abasolo and Tortugas types, respectively, and where there is control over their associations, they appear in later periods than the two larger types. In Tamaulipas and on the Texas coast, Catán and Matamoros points occur in association with pottery whereas their larger counterparts are pre-pottery. Abasolo and Tortugas points occur far inland in Texas, but the two smaller types do not, as far as known.

DISTRIBUTION

From southern Tamaulipas to central Gulf coast of Texas, inland over Southwest Texas.

ESTIMATED AGE

May have first appeared about 500 A. D. and (at least in Brownsville, Rockport, and Mier Foci) survived until the 18th century.

REFERENCES

Named by R. S. MacNeish, manuscript in preparation on archeology of southern Tamaulipas.
CLOVIS POINTS
(Plate 85)

This description is tentative; an adequate one must be made from a study of fluted points wherever they occur in North America.

DESCRIPTION
Outline: Usually a narrow leaf shape with broadest part near mid-section or somewhat farther toward the tip. In rare cases the broadest part is at or near the base (F), forming a triangle. The edges are usually convex but may be fairly straight, especially toward the proximal (lower) end, where they have been ground smooth. Excessive grinding at proximal end occasionally produced recurved edges (G, H, L, O, P). The two lateral projections near the base of O are unique, and as edges are ground smooth above, below, and over these projections, they must have been chipped that way originally. Compared with Folsom points (Plate 92), the flutes of Clovis points are usually crudely made and seldom reach as much as half way from base toward tip; G is an exception. Sometimes more than a single blow was needed to remove the flute (D, J, K). Nearly all known Clovis points are fluted but most have a longer or more even-sided flute on one side than the other. It is possible that some have no flutes, which would make them very difficult to distinguish from some Plainview points (Plate 116). As on Plainview points, the bases are always concave and often recurved with the concavity rounding into the basal corners.

Dimensions: Length varies from about 6 to 14 cm. on specimens from Texas, width about 2 to 4 cm. While there is no doubt that most Clovis points are considerably larger and heavier than Folsom points, the two types overlap in size, so that B–E are smaller than specimen M on Plate 92. However, the thinness of Folsom points makes them lighter; their flutes extend nearly to the tip in most cases, they often have a small nipple in the middle of the basal concavity which is never seen in Clovis points, and the distribution and geological association of the two types are quite distinct.

CULTURAL AFFILIATIONS
These specimens have been isolated finds for the most part. On the basis of extensive excavations at the Blackwater Draw Site near Clovis, New Mexico, by the University of Pennsylvania Museum in the 1930's and the Texas Memorial Museum in recent years, Sellards (1952) has defined a Llano Complex which is characterized by Clovis points. It remains to be seen how far beyond the southern Great Plains this complex is applicable. The Llano Complex belongs to the Paleo-American Stage herein.

DISTRIBUTION
Borax Lake Site in northern California and Naco Site in southern Arizona across United States to Atlantic seaboard; a few specimens from Alaska, Durango, Mexico, and Costa Rica. Examples from most parts of Texas.

ESTIMATED AGE
Somewhat greater than that of Folsom points, probably at least 10,000 B. C. and perhaps as early as 15,000 B. C. at beginning. Excavated specimens in Great Plains and Arizona repeatedly associated with extinct mammoths, animals which did not certainly survive until Folsom times.

REFERENCES
Krieger, 1947a, pp. 12-13, Plate 1; Sellards, 1952. Figs. 7-9, 17, 19-22A.
"DALLAS PENTAGONAL POINTS"

Crook and Harris (1954a, Plate 1, Nos. 12, 13) illustrate two examples of "Dallas Pentagonal points". An examination of similar specimens from northeast Texas in the University of Texas collections raises the question of whether these are sufficiently distinct from Carrollton and Elam points (Plate 82) to warrant a separate type.

DARL POINTS

(Plate 86)

DESCRIPTION

Outline: Blade usually a long, slender triangle with edges straight to slightly convex. Shoulders vary from almost none to slight, angular projections; barbs absent. Blade commonly beveled, usually on right edge of both faces, bevel being narrow and very steep. Blade edges sometimes very finely serrated, on beveled as well as unbeveled specimens. Stem edges parallel to flaring and sometimes well smoothed by grinding. Bases usually concave from slightly to deeply, but may be straight (L, N, O, T, Y, AA, DD). Stems sometimes beveled as well as blades.

Dimensions: Total length about 2.5 to 7 cm., average about 5 cm. Width 1 to 1.5 cm. Stem varies from nearly 1/2 to as little as 1/6 of total length.

CULTURAL AFFILIATIONS

Believed to have appeared toward end of Edwards Plateau Aspect, Archaic Stage, and to have continued into Central Texas Aspect, Neo-American Stage. Closely related to Yarbrough type (Plate 125), with which there is considerable overlap in features and which occupies a similar time position in East Texas, continuing from Archaic Stage into Gibson Aspect of Neo-American Stage. Tendency toward extreme narrowness, concave base, and frequent beveling provide principal contrasts with Yarbrough type.

DISTRIBUTION

Common in Central and North-Central Texas and westward to Pecos River mouth.

ESTIMATED AGE

Possibly from about time of Christ to 1000 A. D.

REFERENCES

Miller and Jelks, 1952, p. 175 and Plate 23, No. 1; Bell and Hall, 1953, Plate 4.
“DENTON NU~-STEMMED POINTS”

Crook and Harris (1954a, Plate 1, Nos. 10, 11) illustrate two examples of “Denton Nub-Stemmed Points”. The present authors regard these as falling within the range of Gary points (Plate 94) and would include them with that type at least until specific reasons are given for a subdivision.

DESMUKE POINTS

(Plate 87)

DESCRIPTION

Outline: Small, shoulderless, roughly lozenge-shaped points. Blade edges straight to convex; base contracts more or less to point rather than being convex to semicircular as in case of Abasolo points (Plate 79). Edges of base tend to be straight, or one edge fairly straight while other may be convex; base and blade frequently meet at a distinct angle. Blades sometimes beveled along either right or left each of both faces, but not as frequently as in Abasolo type.

Dimensions: Total length 3 to 5 cm., average about 4 cm. Maximum width 1.5 to 2.5 cm. Cross-section may be thick and diamond-shaped with ridge on each face.

CULTURAL AFFILIATIONS

Archaic Stage in Southwest Texas, probably belonging to Falcón or Mier Focus, or both, but most frequent in interior where no complexes have been accurately defined. Probably related to both Abasolo and Catán points (Plates 79, 84) but distribution much more limited than that of either of the other types.

DISTRIBUTION

Apparently most frequent along middle parts of Frio and Nueces River valleys, decreasing southward toward lower Rio Grande, and toward coast in Nueces and Kleberg Counties. Not recognized as yet along rest of Texas coast or in Central Texas. Many specimens made of a white quartzite (A-N) found in Duval, McMullen, and probably other adjacent counties; elsewhere, made of various flints (O-HH).

ESTIMATED AGE

Not determined.

REFERENCES

None.
No satisfactory study of this type has been made, although Krieger (1947a) and Wormington (1948) have argued for its distinction from other types of the early post-glacial period. Its name derives from the Eden Valley in southwestern Wyoming, where both Eden and Scottsbluff points were found in association with extinct bison at the Finley Site (Moss, et al, 1951, describe the geology of the site and illustrate the artifacts but do not describe them or use type names).

Generally speaking, the Eden point is a long and very narrow artifact, beautifully chipped with flake scars in more or less matching pairs on both faces, meeting along a central ridge ("collateral chipping"). It is usually diamond-shaped in cross-section and has no shoulders. The basal edges are ground and may be slightly narrower than the blade, due to excessive grinding. The distribution of this type conforms essentially to the High Plains, and in Texas it is confined to the Llano Estacado, so far as known. The estimated age is between about 7000 and 4000 B.C. although it may not have lasted the entire span. Usually found with Scottsbluff type in Plains but not nearly as widespread as the latter.

**EDGWOOD POINTS**
(Plate 88)

**DESCRIPTION**
Outline: Short triangular blade with edges sometimes straight, usually convex. Blade occasionally beveled on right edge of both faces. Shoulders prominent to well barbed. Stem edges expand widely with base often as wide as shoulders. Base may be nearly straight (B, N, T) but is usually concave.

Dimensions: Total length about 3 to 5 cm., average about 4 cm. Maximum width 2 to 3 cm. Stem width usually 1.5 to 2 cm. and stem usually ½ to ⅓ total length.

**CULTURAL AFFILIATIONS**
Not common in any known complex but occurs with some consistency in components of East Texas Aspect, Archaic Stage, and to a lesser extent in Edwards Plateau Aspect. Edgewood points resemble Ellis points (Plate 89) in size and proportions, differing mainly in their concave bases.

As the two types appear to have about the same distribution in time and space, it may be argued that they should be combined into one. Edgewood points also resemble three of the larger Edwards Plateau Aspect types: Fairland, Frio, and Martindale points (Plates 91, 93, 102) in some respects and some of those on Plate 88 perhaps belong to these types. In general, Edgewood points are smaller and broader in proportion to length than the above Central Texas types, and lack basal notching.

**DISTRIBUTION**
Principally found in northeast Texas, and sporadically from there toward Central and North-Central Texas, perhaps also toward coastal plain.

**ESTIMATED AGE**
Probably late in Archaic Stage, appearing shortly before or after time of Christ.

**REFERENCES**
None.
PLATE 88

Legend:
A - B - C - D - E - F - G
H - I - J - K - L - M
N - O - P - Q - R - S
T - U - V - W - X - Y
Z - AA - BB - GG - DD - EE

Scale: 1 2 3 4 5 6 7 8 9 10 CM.
ELAM POINTS
(Plate 82, M-U)

DESCRIPTION
Outline: Small, stubby blade with edges straight to convex. Shoulders weakly developed to nearly absent. Stem roughly rectangular with edges parallel or slightly expanded or contracted, base straight to slightly convex. Stem edges often smoothed, base less often.

Dimensions: Total length about 2 to 3.6 cm., average 2.5 to 3 cm. Stem usually about half the total length, sometimes a little more or less. Small size may indicate use as arrow points, but thickness and workmanship compares with other dart-point types.

CULTURAL AFFILIATIONS
Characteristic of Elam Focus in Archaic Stage, also occurring as minor type in East Texas Aspect. Some overlapping with Ellis points (compare T with Plate 89, C, D, H), but shoulders generally less well developed, stem and blade more equal in size, stem edges do not expand as much, and consistently smaller in size range.

DISTRIBUTION
Apparently most common in Dallas area in East Fork and Trinity River valleys, fading out in northeast Texas, but not known in any notable numbers anywhere.

ESTIMATED AGE
500 B.C. to 450 A.D. (Crook and Harris, 1952).

REFERENCES
Crook and Harris, 1952: 1954a, p. 11, Plate 6, Nos. 6-12, who call the type “Elam Stemmed.” Probably includes “Orla Stemmed” of Stephenson (1949b).

ELLIS POINTS
(Plate 89)

DESCRIPTION
Outline: Short triangular blade with edges straight to convex, occasionally slightly concave (A, G, Y). Shoulders prominent to well barbed. Stem expands toward base but never as broad as shoulders; stem edges tend to be straighter than in most types with cut-out corners. Bases straight to convex.

Dimensions: Total length about 3 to 5 cm. Maximum width across shoulders about 2 to 3 cm.; smaller specimens (B-E) may have been re-chipped. Stems equal ¼ to nearly ½ of total length and are 1.5 to 2 cm. wide.

CULTURAL AFFILIATIONS
Widely distributed in Archaic Stage, more or less throughout Texas except for Southwest section and probably the upper Panhandle. Never numerous in any particular area but may be of greatest relative frequency in East Texas Aspect. In same area, type survived into association with pottery in Alto Focus of Neo-American Stage (Newell and Krieger, 1949, pp. 166-167). Survival into pottery association is possible but not proved in other areas. Although similar in size and proportions to Edgewood points (Plate 83), Ellis appears to have a much wider distribution and lasted somewhat later. An extended study would probably show...
this type to be very widespread in the eastern United States in late Archaic and early Woodland cultural association, like Gary points (Plate 94), but less frequent.

DISTRIBUTION
See paragraph above.

ESTIMATED AGE
Possibly 1000 B.C. or earlier to 500 or 1000 A.D.

REFERENCES
Newell and Krieger, 1949, pp. 166-167 and Fig. 8; Miller and Jelks, 1952, pp. 171-172 and Plate 22; Ford, 1952, p. 115 and Fig. 45; Bell and Hall, 1953. Specimens illustrated by Stephenson (1949b, Plate 8, No. 20) appear to be closer to Palmillas type (Plate 110) than to Ellis.

ENSOR POINTS
(Plate 90)

DESCRIPTION
Outline: Blade triangular and varying considerably in length and width; edges often quite straight, otherwise slightly convex, occasionally finely serrated. Shoulders vary from slight to pronounced; barbs, if present, are short. Stems very broad across neck, due to notches being shallow, and bases commonly wider than shoulders so that basal corners are in line with blade edges. Occasionally base is less wide than shoulders but shallow notches and broad stem neck suggest Ensor type (Q, T, HH). Bases most commonly straight but may be concave (G, I, M, R, U, V, Z, BB, JJ) or convex (J, O, DD, EE).

Dimensions: Total length about 3 to 7 cm., average perhaps 5 cm. Maximum width across base or shoulders from 2 to 3 cm. Stem seldom more than 1 cm. long, therefore from $\frac{1}{6}$ to $\frac{1}{7}$ of total length.

CULTURAL AFFILIATIONS
Edwards Plateau Aspect, probably relatively late in its total span and continuing into Central Texas Aspect; also Pecos River Focus and possibly other cultural units in late Archaic or early Neo-American Stage. Overlaps with Marcos points (Plate 100) but the latter are generally larger, have much deeper notches which produce narrower stem neck and base always less wide than blade, and consequently have longer barbs.

DISTRIBUTION
Occurs most frequently in Central Texas and lower Pecos River area, decreasing southward toward lower Guadalupe River and eastward to upper Sabine River.

ESTIMATED AGE
Possibly 1000 or 2000 B.C. to 500 or 1000 A.D.

REFERENCES
Miller and Jelks, 1952, p. 172, Plate 22, panel 2 (only five in top row and first two specimens in second row; last three in second row would now be classed as Frio points). The "Juno Broad Base" points illustrated by Taylor (1948, Plate 9, D: 1949) would rather clearly be included in Ensor type. See also Bell and Hall, 1953, pp. 8-9 and Plate 8 (only the specimen on right belongs to this type).
DESCRIPTION

Outline: Triangular blade with edges sometimes straight, usually convex. Shoulders narrow, seldom barbed. Stem formed by long, shallow notches so that strongly flaring base usually as wide as, or wider than, shoulders. Base characterized by wide, deep concavity which produced very sharp corners; unusually fine edge-chipping makes the bases thinner and sharper than they appear in the photographs. Blade edges sometimes finely serrated, rarely beveled.

Dimensions: Total length about 3.5 to 7 cm., average perhaps 5 cm. Maximum width across shoulders or base about 2 to 3 cm. Stem 1/5 to nearly 1/2 of total length.

CULTURAL AFFILIATIONS

Edwards Plateau Aspect, Archaic Stage, but not as common as several other types. Some resemblance to Darl points (Plate 86) but Fairland much wider, stem corners flare outward more widely with sharper tips, stem edges not smoothed nor blade beveled as much as in Darl type. Differ from Edgewood points (Plate 88) in having smaller shoulders, much longer outward and downward sweeping notches, and sharper, thinner stem corners.

DISTRIBUTION

Central Texas.

ESTIMATED AGE

Possibly not as long-lived as more common types of Edwards Plateau Aspect; say about 1000 B. C. to 500 A. D. or part thereof.

REFERENCES

Kelley, 1947b, p. 124 and Plate 14, C.
FOLSOM POINTS
(Plate 92, A-O)

DESCRIPTION
Outline: Usually leaf-shaped with broadest part near middle or somewhat forward of middle; in some cases it is far forward, closer to the tip (M); in others the edges are parallel part of the distance forward (D, E, N). Base always concave, sometimes very deeply so, with small nipple or protrusion in center (B, D, E, I, L, M). Channel or flute removed nearly full length from both faces, making central sections very thin (A-N). In some cases, flute occurs on one face only. It is now becoming recognized that some Folsom points are unfluted, being too thin for this, while the general outline, deep basal concavity, and nipple occur as on fluted specimens (O). While the central nipple is sometimes called the “striking platform” (for removal of the flutes), this function may be disproved by its occurrence on unfluted specimens. The blade edges are almost always smoothed by grinding from the base about as far forward as the point of greatest width.

Dimensions: Length ranges from about 3 to 8 cm., most specimens from Texas and elsewhere being from 3 to 5 cm. Widths range from 1.6 to 2.8 cm. The largest one shown (M) is a giant for this type and is larger than some Clovis points (Plate 85); A and B are also unusually large. Interestingly, all three of these large examples are from Uvalde County in the southwestern section of Central Texas. On the whole, Folsom points are quite small, a matter generally obscured by their confusion for many years with Clovis points. Also, due to their thinness, they usually weigh much less than Clovis points even when approaching the latter in size.

CULTURAL AFFILIATIONS
Generally associated with so-called “Folsom culture” although this complex has never been defined. Folsom points have been found in several cases with extinct Pleistocene bison species, spall scrapers, snub-nosed scrapers, tiny gravers, and a few other artifacts. When found under controlled conditions, they seldom occur in the same association with the older Clovis points on the one hand, or the later Scottsbluff, Eden, Plainview, Messervy, and Angostura points (the so-called “Yuma points”) on the other.

DISTRIBUTION
Great Plains from south-central Canada to central Texas, including eastern and central New Mexico, and extending almost to Gulf coast of Texas. Much more restricted than that of Clovis points, although due to the fact that the latter have often been called “Folsomoid”, “Folsom-like”, and “Generalized Folsom” points, this important difference in distribution has usually been obscured in the literature.

ESTIMATED AGE
Approximately 8000 B.C., based on a radiocarbon date of 9883 +300 years ago, obtained from bison bone in the Folsom level of the Lubbock, Texas, city reservoir site (Sellards, 1952). This one date does not reveal the whole span of time for Folsom artifacts, but these had given way to other types by approximately 7000 B.C.

REFERENCES
FRIO POINTS
(Plate 93)

DESCRIPTION

Outline: Triangular blade which is often short and broad, edges usually straight to convex but also fairly often concave or recurved (D, E, R, W, CC, DD, EE). Shoulders occasionally weakly developed (A-C, L, T, Z, AA) but usually strong or with good barbs. Stem formed by corner notches, often as wide as, or wider than, shoulders. Base always concave but in many cases recurved due to a deep U-shaped notch in center (A, B, D, F-L, O-T, V, X, Z, BB, DD); in others, the notch is not prominent but the recurved basal edge suggests that it was chipped with this principal in mind (remaining specimens).

Dimensions: Total length about 3 to 7 cm., average perhaps 5 cm. Maximum width across shoulders or base 2 to 4 cm. Stem ⅛ to 1/6 of total length.

CULTURAL AFFILIATIONS

Minor type in Edwards Plateau Aspect and Pecos River Focus, Archaic Stage. The smaller specimens (A-P) resemble Edgewood points (Plate 88). Some resemblance to Fairland points (Plate 91) but basal corners rounded or squared rather than sharply pointed, and corner notches of different shape. Also some resemblance to Martindale points (Plate 102) but lacks the two-curve “fish-tail” basal edge of the latter.

DISTRIBUTION

General in Central Texas but apparently more common in western portions and extending to lower Pecos River or farther. Also in south-central portion.

ESTIMATED AGE

Possibly 2000 or 3000 B. C. to 500 A. D.

REFERENCES

Kelley, 1947b, p. 124 and Plate 14, D; Miller and Jelks, 1952, Plate 22, panel 2 (last 3 specimens, erroneously included in Ensor points), and Plate 23, No. 9.
GARY POINTS
(Plate 94)

DESCRIPTION
Outline: Triangular blade with edges usually straight to convex but sometimes concave or recurved (C, F, H, J, U, W, X). Shoulders may be small but usually flare out widely almost at right angles; barbs, if present at all, are short (I). Stems usually contract strongly to pointed or somewhat rounded base but may at times approach being parallel-sided (I).

Dimensions: Total length about 4 to 8 cm., occasionally a little shorter (C) or longer (S). Maximum width across shoulders 2 to 5 cm. Stems more constant in length than blades, so that on shorter specimens (A, C-F) stem about \( \frac{1}{2} \) total length, on longer ones \( \frac{3}{4} \) to \( \frac{4}{3} \).

CULTURAL AFFILIATIONS
Common in East Texas Aspect, Archaic Stage, surviving into association with pottery in Alto Focus and possibly other foci of both Gibson and Fulton Aspects, Neo-American Stage, in Caddoan area. May have survived almost to Historic Stage in some localities in Caddoan area (e.g., in McCurtain Focus). Also occurs very widely in Eastern United States in Archaic Stage and in early Woodland period with pottery, even more widely than do Ellis points (Plate 89). Wells points (Plate 123) resemble Gary but are narrower in proportion to length, the stems are consistently about \( \frac{1}{4} \) the total length and usually well smoothed, and Wells points are of much more limited distribution, being virtually confined to East, Central, and the eastern end of North-Central Texas in our present knowledge. The smaller Gary points somewhat resemble Langtry points (Plate 98) and the larger, crudely chipped ones (V-Y) closely resemble Almagre points (Plate 77), both of which occur in Pecos River Focus and down Rio Grande to Falcón area. However, none of the three types (Gary, Langtry, Almagre) occurs as an established type in the large intervening area of Central Texas to provide an historical connecting link. On the other hand, all three should be on approximately the same time level in eastern and western Texas, and they may have been historically connected at one time, never gaining any favor in the central area where so many other styles were common.

ESTIMATED AGE (Texas only)
Possibly 2000 B. C. to 1000 A. D., for the most part, then possibly being retained in some foci as late as 1500 or 1600 A. D. They are consistently collected on the same sites with Caddoan pottery types, but specific data on association is lacking except in Alto Focus.

REFERENCES
Called "Gary Contracting Stem" points by Newell and Krieger, 1949, pp. 164-165 and Fig. 57; Ford, 1952, p. 115 and Fig. 45; Stephenson, 1952, Fig. 95, row A; Crook and Harris, 1954a, pp. 4, 11, and Plate 6. In same reference, Crook and Harris illustrate what they call "Denton Nub-Stemmed" points, but since no specific description of Gary points was available at that time, and they do not explain the differences between "Denton Nub-Stemmed" and Gary points, it is questionable whether a different type is valid.
JUNO BROAD BASE POINTS

See Ensor points (Plate 90).

KENT POINTS

(Plate 95)

DESCRIPTION

Outline: Blade crudely triangular, often asymmetrical, edges usually convex but not in same degree; may be rather straight (G, K, N, T, V, AA) and in a few cases, concave (D, L, P). Shoulders weakly developed to right-angular; barbs (V, AA) uncommon and stronger on one side than other. Stems more or less parallel-edged, but like blades, usually poorly chipped and uneven. Bases usually convex, occasionally straight (P, Q, U, BB). Rarely, blade beveled.

Dimensions: Total length 3.5 to 7 cm., occasionally a little more or less, average about 4 to 5 cm. Maximum width across shoulders 1.5 to 3 cm. Stem 1/5 to 1/5 total length, 1 to 1.5 cm. wide. Due to crude chipping, these specimens are usually notably thicker than other types. Those from Central Texas (W, X, BB) are generally larger than those from coast.

CULTURAL AFFILIATIONS

Most common in Aransas Focus, Archaic Stage; infrequent in Edwards Plateau Aspect and East Texas Aspect. Somewhat resemble Yarbrough points (Plate 125) but more crudely chipped and asymmetrical, lack stem smoothing, expanded stem edges, and frequently straight bases of latter—differences which are more striking on actual specimens than photographs can indicate.

DISTRIBUTION

Central portion of Coastal area; northeastward to Addicks Reservoir area west of Houston and into East Texas area; northward into Central Texas. Frequency decreases going inland from Coastal area.

ESTIMATED AGE

Probably relatively late in Archaic Stage, in Christian era.

REFERENCES

Campbell, 1952, p. 66 and Plate 9, A-P (no type name given); Wheat, 1953, various specimens on Plates 35-40 in several of his "provisional types".
KINNEY POINTS
(Plate 96)

DESCRIPTION

Outline: Triangular to leaf-shaped blade, edges almost straight in some cases (P, Q, T, V) but usually convex. On longer and narrower specimens the edges may be almost parallel for some distance forward from base. In rare cases, lower edges are smoothed (I, W) and specimen may be confused with Plainview points (Plate 116). Bases always concave, from slightly (J, K, X) to deeply (F, I, P), usually in single broad arc but occasionally in recurve (I, N, V, Z).

Dimensions: Length 4.5 to 11 cm., maximum width about 2 to 3.5 cm. However, it is quite possible that longest and broadest specimens (or even all of them) are knives rather than projectile points, but there seems to be no feasible way to distinguish them. It seems possible that at least some of the "Kinney points" were used as projectile points, particularly those which are of symmetrical outline with thinned, concave bases (such as F, P-R), and these grade imperceptibly into larger and heavier specimens which are probably knives (S-AA). It seems better to illustrate the range than to attempt at this time to decide which should be called knives.

CULTURAL AFFILIATIONS

Minor type in Edwards Plateau Aspect, Aransas Focus, Pecos River Focus, and Falcón Focus, all in Archaic Stage. Similar in shape and distribution to Tortugas points (Plate 120) but larger on the whole, unbeveled, and grade from triangular to leaf-shaped. Also resemble Pandora and Refugio points (Plates 112, 117), but these have straight and convex bases, respectively, and differ somewhat in general proportions and distribution.

DISTRIBUTION

Most frequent from central coast inland northwestward toward Pecos River mouth.

ESTIMATED AGE

Possibly 1000 or 2000 B. C. to 1000 A. D.

REFERENCES

None.
LANGE POINTS
(Plate 97)

DESCRIPTION

Outline: Large triangular blade with edges straight to convex, occasionally concave or recurved (B, E, R, U, X). Shoulders prominent and often well barbed (C, J, M, S, U, W, X). Stem edges expand and are often straight, resembling those of Castroville type (Plate 83) but not as wide. Base almost always straight but may be slightly concave or convex.

Dimensions: Total length about 5 to 8.5 cm. (stubby specimens like E-G may have reworked blades). Maximum width across shoulders 2.7 to 4 cm. Stems 1.7 to 2.5 cm. wide at base and 1/3 to 1/5 of total length.

CULTURAL AFFILIATIONS

Primarily Edwards Plateau Aspect, extending into East Texas Aspect, Aransas Focus on coast, and toward plains below Panhandle. Although quite similar to Castroville points (Plate 83), the stems are generally less wide, the long and massive barbs which align with the base are absent, the bases are usually straight rather than convex, the blade edges are somewhat more variable, and Lange points are considerably more widespread than Castroville, which so far as known, are typical only of Edwards Plateau Aspect. The stems are comparable in shape to those of Marshall points (Plate 101) but are longer, and the blades lack the massive roundness of the latter.

DISTRIBUTION

Most common in Central Texas, extending with decreasing frequency into East Texas, toward the central coast, and northwestward into the plains.

ESTIMATED AGE

About 4000 B. C. to 1000 A. D. or greater part thereof.

REFERENCES

None, unless included in Castroville type by Kelley, Miller and Jelks. Some of present specimens may be Castroville, particularly B, E, L, M, U.
LANGTRY POINTS
(Plate 98)

DESCRIPTION

Outline: Triangular blade with edges straight to concave or recurved, seldom convex, which is unique among Texas dart-point types. Usually exceedingly thin and finely chipped, even the largest ones. Shoulders prominent to widely outflaring, often uneven (A, E, G, J); barbs may sweep widely outward (Q, R, V). Stems long, contracting, at times nearly parallel-edged (B-E, I-K, R, Y) or even expanding slightly (L, M). Bases are usually concave, even when stem contracts strongly (A, H, N, S, T, BB), but may be straight or (rarely) convex. Possibly more than one type is represented, but features intergrade so that separation difficult.

Dimensions: Total length about 4 to 7 cm., average about 6 cm. Maximum width across shoulders about 2.2 to 4 cm. Base .6 to 1.6 cm. wide. Stem often ½ total length but ranges to ¼.

CULTURAL AFFILIATIONS

Common type of Pecos River Focus and, with Shumla points (Plate 119), diagnostic of that focus. Extends down Rio Grande valley as minor type in Falcón Focus; occurs rarely in Edwards Plateau Aspect but uncertain whether made there or intrusive from Pecos River Focus. Some larger, thicker, and considerably heavier specimens designated as a "erude variety" of Langtry type have here been placed in Almagre type (Plate 77), which has distinct distribution. Certain Langtry points with contracting stem and convex base (F, G) closely resemble some Gary points (Plate 94) in East Texas, but a firm connecting link through Central Texas is lacking (see discussion under Gary points).

DISTRIBUTION

Apparently centered in Pecos River-Rio Grande confluence area, extending over adjacent parts of Trans-Pecos Texas and northern Coahuila in the general Big Bend Area, and southeastward down Nueces and Rio Grande valleys about as far as McMullen and Starr Counties, respectively. Also occurs in Tamaulipas panhandle next to Rio Grande valley.

ESTIMATED AGE

An unknown time before Christ to 700 or 800 A. D.

REFERENCES

Kelley, Campbell, and Lehmer, 1940, Fig. 1 and Plates 4, 5, 20; Kelley, 1947a, p. 104; Taylor, 1948, p. 84, 1949, p. 81. Bell and Hall, 1953 report this type as common throughout Oklahoma, but this appears to be a wrong identification of the type.
LERMA POINTS
(Plate 99)

DESCRIPTION

Outline: Usually long, slender, double-pointed leaf-shaped blade, although one end may be somewhat more rounded than pointed (B, D, J, K, P), and a few specimens are rather broad (A, H, N, P). It is not thought that all are projectile points, for the broader ones, at least, may be double-pointed knives. However, for the most part their thickness and steep edges make them unsuitable for knives and their symmetry suggests the balance needed for projectile points. They are thickest in the middle and thinned down enough at one end to be hafted.

Dimensions: Length 5.5 to 10 cm., most being 6 or 7 cm. Maximum width 2 to 3 cm., at middle or close to it.

CULTURAL AFFILIATIONS

Minor type in Edwards Plateau Aspect, Pecos River Focus, and perhaps Aransas Focus, all of Archaic Stage. Similar to Refugio points (Plate 117) when one end tends to be somewhat rounded; however, they have a distinct distribution in northern Mexico as well as Texas.

DISTRIBUTION

Western part of Central Texas to Pecos River mouth, southward to central coast and Southwest Texas, and south of Rio Grande to southern Tamaulipas.

ESTIMATED AGE

Possibly appeared earliest in southern Tamaulipas, several thousand years before Christian era; in Texas from well before time of Christ to somewhat after.

REFERENCES

Named by R. S. MacNeish, manuscript on archeology of southern Tamaulipas.

LONG POINTS

See Angostura points (Plate 80).
MARcos POINTS  
(Plate 100)

DESCRIPTION

Outline: Generally broad triangular blade with edges straight, slightly convex, or gently recurved. Always barbed because deep notches cut into corners at about 45 degree angle; barb tips frequently in line with base (A, B, H, M, N, R, S-U). Angle of notches also always makes stem strongly expanding; bases straight to convex, rarely slightly concave (K, V), generally not as wide as barbs.

Dimensions: Total length 4.5 to 9 or 10 cm., average 5 or 6 cm. Maximum width across barbs about 3 to 4.5 cm. Stem base about 2 to 3 cm. wide and stem rather consistently about 1 cm. long, thus 1/5 to 1/9 of total length.

CULTURAL AFFILIATIONS

Minor type of Edwards Plateau Aspect and Pecos River Focus, Archaic Stage. Bears resemblances to Ensor points (Plate 90) but is distinguished by deeper notches and narrower stem neck in proportion to blade width, and is generally broader with much longer barbs. Also bears resemblances to Castrovile points (Plate 83) but stems not as broad across neck and expand more sharply, notches cut inward from corner rather than upward from base, and massive squared barbs of latter absent. As with most types, individual specimens are often difficult to assign to one or another with complete confidence.

DISTRIBUTION

Approximately from lower Pecos River valley across central Texas to middle Brazos River, and from Possum Kingdom Reservoir area on upper Brazos southward to central Coastal area.

ESTIMATED AGE

Possibly 2000 B. C. to 1000 A. D. or greater part thereof.

REFERENCES

None.
MARSHALL POINTS
(Plate 101)

DESCRIPTION

Outline: Blade varies from triangular to broad oval, edges from nearly straight to greater part of a semicircle. Shoulders always strongly barbed, the more massive barbs commonly being in line with the base. Notches may have removed most of corner (A-C, E, G, P) but usually were cut upward into the blade from the base. Stem may be parallel-sided (A-H, J, K) or slightly expanded, and is often quite short in proportion to the massive blade. Base straight or slightly concave or convex.

Dimensions: Total length about 5 to 11.5 cm., most between 6 and 8 cm. Maximum width about 3 to 5 cm., across barbs or middle of blade. Stems 1.2 to 2.5 cm. wide and ¼ to ⅛ of total length.

CULTURAL AFFILIATIONS

A common type of Edwards Plateau Aspect. Those with parallel-sided stems and slightly concave bases approach closely to the Pedernales points with the least concave bases (Plate 114, H-M) and some of them may actually be Pedernales points; however, typical Pedernales points have notably deeper bases than Marshall points (Plates 113-115).

DISTRIBUTION

Common only in Central Texas; occurs infrequently in North-Central Texas.

ESTIMATED AGE

Possibly 3000 or 4000 B. C. to 1000 A. D. or greater part thereof.

REFERENCES

None, except that some such specimens were probably included in groups called "Smithwick Small Stem" and "Bluffton Barbed" by Kelley (1947b, p. 124 and Plate 14, B, I).
MARTINDALE POINTS
(Plate 102)

DESCRIPTION

Outline: Triangular blade with edges sometimes straight, usually convex. Shoulders pronounced to well-barbed, but barbs seldom reach to base (P, R, V, Z). Stem varies from nearly parallel-edged (E, P) to strongly expanding. The most distinguishing feature of these points is that the base is formed by two distinct convex curves meeting in a depression in the center, a “fish-tail” best seen in specimens C, D, I, J, M, Q, S, T, Y, Z-CC. On other specimens the base appears to be a simple recurve but close examination shows the double-convex “fish-tail”. It is assumed that this form of base was the result of deliberate effort setting it apart from other bases.

Dimensions: Total length 3.5 to 7 cm., average 4 to 5 cm. Maximum width across shoulders 2.5 to 4.5 cm. Stems 2 to 3.5 cm. wide and 1/5 to nearly ½ total length.

CULTURAL AFFILIATIONS

Minor type of Edwards Plateau Aspect, similar to Frio and Uvalde points (Plates 93, 122). These three types are distinct mainly in the shape of the stem and method of indenting the base, but they also have somewhat different distributions.

DISTRIBUTION

Central Texas only, so far as known.

ESTIMATED AGE

Possibly 3000 or 4000 B. C. to 1000 A. D. or greater part thereof.

REFERENCES

Miller and Jelks, 1952, p. 176 and Plate 23, No. 9 mention this type but illustrate what appears to be a Frio point. The same applies to that illustrated by Bell and Hall (1953, Plate 4), who have wrongly identified this type as common in Oklahoma.
MATAMOROS POINTS
(Plate 103)

DESCRIPTION

Outline: Same as Tortugas points (Plate 120) and similarly usually beveled on either right or left edge of both faces, occasionally on both edges of one or both faces.

Dimensions: Smaller than Tortugas points, ranging from 2 to 4 cm. in length and 1.5 to 2.5 cm. in width. In dimensions these could be classed as arrow points, but in thickness and use of bevels they are like other dart points. Between 4 and 4.5 cm. in length they overlap the smallest Tortugas points.

CULTURAL AFFILIATIONS

Linked with Catán points (Plate 84) as diagnostic types of Mier Focus, Archaic Stage, in Southwest Texas. The two types are small counterparts of the Tortugas and Abasolo types, respectively, and where there is control over their associations, they appear in later periods than the two larger types. In Tamaulipas and on the Texas coast, Matamoros and Catán points occur in association with pottery whereas their larger counterparts are pre-pottery. Tortugas and Abasolo points occur far inland in Texas, but the two smaller types do not, as far as known.

DISTRIBUTION

From southern Tamaulipas to central Gulf coast of Texas, inland over Southwest Texas.

ESTIMATED AGE

May have first appeared about 500 A. D. and (at least in Brownsville, Rockport, and Mier Foci) survived until historic times in the 18th century.

REFERENCES

Named by R. S. MacNeish, manuscript in preparation on archeology of southern Tamaulipas.
PLATE 103
MESERVE POINTS
(Plate 104)

DESCRIPTION

Outline: Lower part like Plainview points (Plate 116), upper part modified by beveling or re-shaping of broken blade. The lower parts retain the smoothed edges of Plainview points, from which it is probable that some of them actually were Plainview points at one time. The shortest blades were in most cases obviously given new points after being broken, in the course of which some were beveled, usually on the right edge of both faces (A-C, E, F, K, M, Q, S, AA, BB), but others were plain (D, G, N, U). Some of the longer ones probably were made with beveled edges originally (H-J, L, O, P, R, T, V-Z). Both beveled and unbeveled examples sometimes have finely serrated edges (T-BB). Neither beveling nor serration occurs on true Plainview points.

Dimensions: Total length about 3 to 8 or 9 cm. Blade much more variable than stem (smoothed part), which, unless reduced in length by secondary chipping, is 2 to 3 cm. long. Maximum width about 2 to 2.7 cm., same as Plainview points; basal concavity (simple arc or recurve) also like that of Plainview.

CULTURAL AFFILIATIONS

Some are isolated finds, not definitely associated with any known complexes in Texas; others belong to Edwards Plateau Aspect, East Texas Aspect, and other Archaic complexes. Some have been collected on pottery sites.

DISTRIBUTION

Virtually entire State but very rare in Trans-Pecos Texas; Great Plains; Louisiana, Arkansas, Missouri, etc.

ESTIMATED AGE

Probably cover great time span, depending on when original specimen was picked up and re-worked. In Nebraska some are as old as Plainview points (Davis, 1953), showing that principal of beveling was known in Paleo-American Stage, at least in Nebraska. Beveling was not widespread, however, until the Archaic Stage, to which most such specimens probably belong.

REFERENCES

Davis, 1953. Similar specimens have been included in "Dalton points" for several years in the Archaic Stage of Missouri. An extended description of Meserve points, by Davis, is quoted in Bell and Hall, 1953, pp. 6-7.
MONTELL POINTS
(Plate 105)

DESCRIPTION

Outline: Triangular blade with edges sometimes straight but also commonly convex (G, N, T), concave (A, E, F, K, O-Q), or recurved (J, L, W, X). Shoulders sometimes squared but more often have barbs from small to large, sometimes aligned with base (G, J, N, T-X). Stem occasionally parallel-edged but usually expands and is split in center with a deep V-shaped notch. The notch may occasionally be somewhat rounded (Q-S) but this clear bifurcation of the stem is an easily recognizable feature. The base itself was almost always strongly convex before the notch was made.

Dimensions: Total length about 4 to 10 cm., most being about 6 to 7 cm. Maximum width across shoulders or middle of blade seldom less than 3 cm. and may range to 5 cm. Maximum width of stem 2 to 3 cm.; stem length quite uniform at about 1 cm., thus \( \frac{3}{4} \) to \( \frac{1}{10} \) of total length.

CULTURAL AFFILIATIONS

Occurs in Edwards Plateau Aspect and Pecos River Focus, but not among most common types of either. Not known as established type in other complexes.

DISTRIBUTION

Central Texas and westward to Pecos River mouth, possibly into Big Bend area.

ESTIMATED AGE

Possibly 2000 or 3000 B.C. to 500 or 1000 A.D.

REFERENCES

Kelley. 1947b, p. 124 and Plate 14, F, considers this type diagnostic of a "Uvalde Focus".
MORHISS POINTS
(Plate 106)

DESCRIPTION

Outline: Triangular blade with edges almost always convex (L has straight edges but may be a Bulverde point). Shoulders generally small, from hardly visible (C, H) to right-angular. Barbs, if present, very small (E, L). Stem parallel-edged with convex base to somewhat contracted with straight to convex base. In general, stem very broad and rounded with blade not greatly wider.

Dimensions: Total length about 5 to 9 cm., average 7 to 8 cm. Maximum width across shoulders about 2.5 to 4 cm. Maximum stem width about 1.8 to 2.5 cm.; stems 1/6 to 1/5 of total length. One of largest and heaviest types classed as dart points in Texas.

CULTURAL AFFILIATIONS

Minor type in complex not yet well defined, for which Morhiss Site in Victoria County is principal known component. This site has numerous chipped-stone artifact types of both Aransas Focus and Edwards Plateau Aspect, Archaic Stage, which is expected from its position near the boundary between Central Texas and the Coastal Plain. The Morhiss type, however, appears to be a rather local development which is uncommon both toward the open coast and the interior.

DISTRIBUTION

See paragraph above.

ESTIMATED AGE

Possibly 2000 B. C. to 1000 A. D.

REFERENCES

None. Similar specimens may be included in “Garcetas Broad Base” points (Kelley, 1947a, p. 104).
MORRILL POINTS
(Plate 107)

DESCRIPTION

Outline: Long, slender artifacts with triangular blade, edges straight to slightly convex. Shoulders very weak and in some cases (N, V, X) virtually absent. Stem usually parallel-edged, occasionally slightly expanded or contracted. Stein edges often smoothed; base straight, occasionally slightly concave or convex. Blade edges may be finely serrated (M, N, V, AA).

Dimensions: Total length 4.5 to 8 cm. but shortest specimens are of crude workmanship (A-I) and of questionable classification. The more definite specimens (J-BB) are rather uniform in length at 5.5 to 8 cm., with most between 6 and 7 cm. Width across blade of most definite specimens very uniform at 2 to 2.5 cm. (J-BB, except O). Stems 1.5 to 2 cm. long, 1/5 to 1/4 of total length; occasionally nearly 1/2 (S, V).

CULTURAL AFFILIATIONS

Minor type of East Texas Aspect, Archaic Stage. Closely linked with Wells points (Plate 123) in East Texas, both continuing into pottery association in Alto Focus, Neo-American Stage. Similar to Travis points in Edwards Plateau Aspect (Plate 121) but latter more variable in stem shape, base, and lack smoothing of stem edges.

DISTRIBUTION

Primarily in central part of East Texas area, possibly occurring rarely in remainder of East Texas and eastern part of Central Texas. The crudest points are generally of reddish chert, difficult to shape, while the best ones are of flint, so that it is difficult to determine which chert specimens should be included.

ESTIMATED AGE

Possibly 1000 B. C. to 500 or 1000 A. D.

REFERENCES

Newell and Krieger, 1949, pp. 167-168, Fig. 58.
NOLAN POINTS
(Plate 108)

DESCRIPTION

Outline: Triangular blade of greatly variable length and width, edges convex or recurved, seldom straight. A slender, needle-sharp tip often results from convergence of recurved edges (D, E, G, J, N, R). Shoulders may be almost absent (E, F, H, K) but usually strong and slant toward tip; barbs absent. Stem varies from narrow to broad, generally parallel-edged but sometimes expanded or contracted slightly. Bases usually straight but may be convex and in rare cases slightly concave (E). The type is most easily recognized by strong, steep bevels on the stem, usually along the right edge of both faces, occasionally on left edge. Rarely, blade is beveled too.

Dimensions: Total length about 4.5 to 13 cm. Maximum width 2 to 4 cm. Stems 1.1 to 3 cm. wide but most between 1.5 and 2 cm. Stem length fairly uniform at about 2 cm. from base to top of curve into shoulder.

CULTURAL AFFILIATIONS

Major type of Edwards Plateau Aspect; minor type in Pecos River Focus and Aransas Focus, all in Archaic Stage. Possibly survives into association with pottery in Henrietta Focus and Central Texas Aspect, but if so, such specimens are very poorly made. Those in Pecos River and Aransas Foci notably smaller and less well made than in Edwards Plateau Aspect.

DISTRIBUTION

Throughout Central Texas, extending to upper Brazos River drainage, lower Pecos River, and central Coastal area.

ESTIMATED AGE

Entire life of Edwards Plateau Aspect, possibly 4000 B.C. to 500 or 1000 A.D.

REFERENCES

Kelley, 1947a, p. 99 and Plate 10, D refers to this type as "Nolan Beveled Stem" and considers it as the diagnostic trait of his "Clear Fork Focus" although it occurs throughout the Edwards Plateau Aspect; he includes C. N. Ray's "Clear Fork Dart Points 1 and 2" within it. Also Miller and Jelks, 1952, pp. 175-176; Campbell, 1952, p. 68 and Plate 10, L.
PAISANO POINTS
(Plate 109, A-L)

DESCRIPTION

Outline: Little data available; specimens A-L believed to be characteristic. Blade triangular with convex edges which are frequently serrated. Stem formed by shallow side notches, hence shoulders weak or absent (B, D, G, J, K). Stem consists of two protrusions flaring outward at about 45 degree angle to nearly downward (D, L). Stem corners rounded, base concave to deeply indented.

Dimensions: From data available, length about 3.5 to 6 cm., width across shoulders about 1.6 to 2.5 cm. Stem 1/4 to 1/6 of total length.

CULTURAL AFFILIATIONS

So far, said to be typical only of Chisos Focus in Big Bend area. As chipped-stone artifacts of any kind are uncommon in this focus, the Paisano type is one of the most scantily represented in Texas, yet it seems distinctive. In its shallow side notches it somewhat resembles the Ensor type (Plate 90). The stems somewhat resemble those of San Patrice points.

DISTRIBUTION

Southern part of Trans-Pecos Texas (Big Bend).

ESTIMATED AGE

Possibly 800 to 1200 A.D.

REFERENCES

Kelley, Campbell, and Lehmer, 1940, Fig. 2; Taylor, 1949, p. 81.
PALMILLAS POINTS
(Plate 110)

DESCRIPTION

Outline: Small triangular to leaf-shaped blade, edges straight to convex, occasionally concave (E) or recurved (U, II, JJ). Shoulders vary from slight (G, P, Q-S, X, GG) to well barbed (A, B, T, Y, Z, AA, KK) and various grades in between. Chief characteristic is small bulbous stem, with expanded, rounded sides and convex base. Occasionally specimens with straight base probably should be included (W, X, BB).

Dimensions: Total length about 3 to 6 cm.; longer specimens (FF, II-LL) may belong to Williams type instead (Plate 124). Maximum width across shoulders about 1.7 to 3 cm. Stems 1 to 2 cm. wide and 1/2 to 1/6 of total length.

CULTURAL AFFILIATIONS

A minor type in most complexes of Archaic Stage in various parts of Texas. Probably late in this stage, surviving in some areas into Neo-American Stage. Similar to Williams points (Plate 124) but smaller and probably later.

DISTRIBUTION

From East Texas across state to Trans-Pecos area, and from upper Brazos and Trinity valleys to central and eastern coastal plain. Although very widespread, does not appear to be common in any particular area. Extends southward in Mexico to southern Tamaulipas.

ESTIMATED AGE

Probably within Christian era.

REFERENCES

Named by R. S. MacNeish, manuscript in preparation on archeology of southern Tamaulipas. Wheat, 1953, includes such points in several of his sub-types from the Addicks Reservoir area west of Houston.
PLATE 110
PANDALE POINTS
(Plate 111)

DESCRIPTION

Outline: Long and slender blade, more often leaf-shaped than triangular, edges usually strongly convex, occasionally straight (A) or recurved to long needle-like tip (I, P, Y). Shoulders poorly developed, often absent. Type most easily recognized by beveling of blade so strongly that it is more like a propeller in cross-section than the ordinary edge-bevel; that is, the twist begins along the centerline of the blade rather than near the edge. Stems are also beveled, but in opposite direction from blade, so that artifact has peculiar cork-screw twist, the purpose of which is unknown. The photographs fail to show this adequately. Stems variable, from parallel-edged to somewhat expanded or contracted, and bases straight, concave, or convex.

Dimensions: Total length about 3.5 to 9 cm., most between 5 and 7 cm. Maximum width across shoulders or middle of blade about 1.5 to 3 cm. Stems 1 to 1.5 cm. wide and 1/6 to 1/7 of total length.

CULTURAL AFFILIATIONS

Belongs primarily to Pecos River Focus, extending rarely into Edwards Plateau Aspect. In general outline of stem and blade it is similar to Nolan type (Plate 108), but this lacks beveled blades. In outline it is also somewhat similar to the Travis type (Plate 121), which lacks the combination of twisted blade and beveled stem. While the blades of many types will sometimes be twisted because the original flint flake was not very well flattened by chipping, Pandale points were made to twist by chipping them that way.

DISTRIBUTION

Appears centered in Pecos-Rio Grande confluence area, decreasing toward Central Texas.

ESTIMATED AGE

Possibly 2000 B. C. to 700 or 800 A. D.

REFERENCES

Named “Pandale Twisted Blade” by Kelley.
PANDORA POINTS
(Plate 112)

DESCRIPTION

Outline: Triangular to leaf-shaped blade, edges almost straight in a few cases (U-Y) but usually convex. On longer and narrower specimens the edges may be almost parallel from 1/2 to 3/4 the distance forward. By definition, bases straight or nearly so, to distinguish from Kinney points (Plate 96) with concave bases and Refugio points (Plate 117) with strongly convex bases. Rarely, basal edges faintly smoothed.

Dimensions: Length about 4.5 to 12 cm., maximum width about 2 to 3 cm. However, it is quite possible that the longest and broadest specimens (or even all of them) are knives rather than projectile points, but there appears to be no definite way of distinguishing them. It seems possible that at least some of the "Pandora points" were used as projectile points, particularly those of narrow, symmetrical outline with thinned bases. The gradation into broader specimens which are more likely to be knives (M, N, X, Z) is constant and probably individuals will differ in their opinions as to which should be called projectile points and which knives.

CULTURAL AFFILIATIONS

Uncertain at present, but a minor type, at least, in Edwards Plateau Aspect and Carrollton Focus of Archaic Stage.

DISTRIBUTION

Most common in portion of Texas where Central and Coastal areas meet, in Victoria, Refugio, and neighboring counties. Occurs infrequently in Central, North-Central, and eastern side of Trans-Pecos Texas.

ESTIMATED AGE

Possibly 2000 B. C. to 1000 A. D. but may be older or younger.

REFERENCES

Crook and Harris (1954a, Plate 1) refer to similar specimens as "Wheeler Leaf points".
PEDERNALES POINTS
(Plates 113-115)

DESCRIPTION
Outline: Blade usually triangular but often leaf-shaped (Plates 113, P, R, S; 114, Q, R, S, U, V) and varying greatly in dimensions and proportions. Edges usually straight or convex, but occasionally concave (Plates 113, D, F, J, L; 115, A), recurved, or narrowed to a slim, needle-like tip (Plate 113, C, I). Shoulders vary greatly from weak to narrow and right-angular and through various degrees of barbs from very small to very large, reaching almost to base of stem (Plate 115 is arranged to show the longest barbs; Plate 114, V, has one barb reaching to base, the other shorter). While blade is highly variable, the type is best recognized by its more or less rectangular stem with concave to deeply indented, U-shaped, base. The base is often thinned, either with two or three small longitudinal flakes removed, or a single large flake, on either or both sides, so that a stem alone, broken off below the shoulders, may sometimes be confused with the basal portion of a Plain-view point (Plate 116); however, the stems of Pedernales points are only very rarely smoothed and the difference is usually apparent to one familiar with both types. The stems may contract somewhat or bulge outward with convex edges.

Dimensions: Total length varies from about 3 to 13 cm., but the smallest specimens (Plates 113, A; 114, A-G) probably have re-chipped blades for the most part, and the largest (Plate 114, S, V) may never have been trimmed down and finished properly. Most specimens range between 6 and 9 cm. in length and 3 to 5 cm. in greatest width. Width of stem ranges from about 1.5 to 3 cm., and stem length is fairly uniform at 1.5 to 2 cm. regardless of total length.

CULTURAL AFFILIATIONS
The most common dart-point type of Edwards Plateau Aspect, Archaic Stage, occurring over a very wide area with the variations shown in Plates 113-115. A minor type in Pecos River Focus, with much less variation in size and stem usually slightly contracted with moderately concave base (like Plate 114, L). May be confused with Bulverde points (Plate 81) when shoulders are small and base not deeply concave. Also some confusion with Lange points (Plate 97).

DISTRIBUTION
Very common over all of Central Texas, extending much less commonly into the adjacent portions of Coastal, North-Central, and Trans-Pecos Texas. Not found, unless very rarely and probably intrusively, in East and Southwest Texas.

ESTIMATED AGE
Entire span of Edwards Plateau Aspect, possibly 4000 B. C. to 500 or 1000 A. D. Poorly shaped examples may be found occasionally in association with pottery complexes at 1000 A. D. or later, but proof of such late occurrence is needed.

REFERENCES
Kelley, 1947a, Plate X, A, and 1947b, Plate 14, A, regards this type as diagnostic of a “Round Rock Focus” but presents no statistics to show it is relatively any more common in this focus than in others of Edwards Plateau Aspect. See also Miller and Jelks, 1952, p. 175 and Plate 23, Nos. 3-5; Bell and Hall, 1953, p. 9 and Plate 4.
PLAINVIEW POINTS
(Plate 116)

DESCRIPTION
Outline: Basically lanceolate with edges more or less parallel for 1/2 to 3/4 the distance from base to tip, a form best illustrated by the nine most nearly complete specimens from the type site at Plainview in the Texas Panhandle (T-BB). Variations in form consist of slight expansion in the middle (E, K-N, Q, S, T) and a gentle recurve of lower edges (G, K, L, N, V, BB) which probably is due to excessive grinding of these edges. Grinding of basal edges almost always occurs. Flaking scars sometimes run parallel across faces or are roughly matched in pairs (B, C, I, K, N, R, S, W-BB); usually they are irregular. Bases are always concave in some degree, from shallow (N) to a deep recurve (D, L).
Dimensions: Length about 4.5 to 8 cm., maximum width about 1.8 to 2.8 cm. Base width almost always between 2 and 2.6 cm., although slightly narrower (A, B, E, H, J) or broader ones (K, L) occur. Concavity in base 1 to 8 mm. in depth.

CULTURAL AFFILIATIONS
Found unmixed with other projectile-point types at Plainview Site, but associated with side and end scrapers, and extinct species of bison. In the Red Smoke Site, Nebraska, apparently associated with Meserve points (Davis, 1953). Elsewhere, sometimes found with Scottsbluff, Eden, and Meserve points, suggesting an early post-glacial age. Complexes for this period have not been defined except for the Llano Complex of Sellards (1952), which as yet contains no definite Plainview points. Many examples come from sites in the Archaic Stage in Texas, especially Edwards Plateau Aspect, Carrollton Focus, and East Texas Aspect. Apparently made for a long time, extending from close of Folsom time through rest of Paleo-American Stage and well into Archaic Stage.

DISTRIBUTION
Occurs practically throughout Texas although never frequent in any site or area; same may be said for distribution throughout Great Plains into south-central Canada. Specimens are known from Alaska and from northeastern Mexico; also from Arizona, New Mexico, and from such states as Louisiana, Arkansas, Missouri, and others farther east. Comparable to distribution of Clovis fluted points (Plate 85), covering the greater part of North America; and shape is much like that of Clovis points except for absence of fluting.

ESTIMATED AGE
Possibly 7000 B. C. to 2000 B. C. or somewhat later. Re-chipped examples may be of any age from 7000 B. C. to historic times.

REFERENCES
REFUGIO POINTS
(Plate 117)

DESCRIPTION

Outline: Long and slender blade, triangular to leaf-shaped; edges usually convex, occasionally nearly straight (V, W), and sometimes brought to a long, needle-like tip (B, F, R). On narrowest specimens, edges may be nearly parallel for some distance (B, E, F, N, Y-AA). By definition, bases convex to semicircular, to distinguish from Kinney points (Plate 96) with concave bases and Pandora points (Plate 112) with straight bases. Most of body usually quite thick with ridge on both faces (best seen in D, F, G, Z, AA), but lower ⅔ or so is notably thinned down to facilitate hafting. Thus, although no real shoulders are present, most of these artifacts have what amounts to a stem section set off from the blade; in this respect they also differ from Kinney and Pandora points. Black asphaltum stains sometimes occur on this stem section on specimens near the coast (J, K), indicating use of asphaltum in cementing haft.

Dimensions: Length about 6 to 10 cm., seldom more or less. Maximum width 2 to 3 cm. As with Kinney and Pandora points, it may be argued that some of these specimens are knives.

CULTURAL AFFILIATIONS

A minor type in various Archaic complexes: Pecos River Focus, Carrollton Focus, Falcón Focus, and Edwards Plateau Aspect. Probably closely related to Lerma points (Plate 99) as well as Kinney and Pandora.

DISTRIBUTION

Found widely in central Coastal area, Southwest, Central, and North-Central areas, and lower Pecos River. Perhaps most frequent on central coast.

ESTIMATED AGE

Possibly 2000 B.C. to 1000 A.D.

REFERENCES

None, except that Crook and Harris (1954a) refer to similar specimens as “Wheeler Leaf” points.
Hibben (1941, Plates 10-12) illustrates a few of the specimens obtained from Sandia Cave in north-central New Mexico. These points are about 5 to 10 cm. or more in length and are characterized by the presence of a single shoulder which slants forward; the opposite edge is a single line or curve from tip to base, or very slightly indented opposite the one shoulder. Two types are recognized: Type 1 has the stem contracted to a pointed or rounded base; Type 2 has parallel stem edges and a concave base. On both types the stem edges are usually ground smooth.

In Sandia Cave these points were found in the same deposit with many Pleistocene animals now extinct and were below the deposit with Folsom points. Recently, radiocarbon age determinations of about 19,000 years (17,000 B.C.) have been obtained on the lower deposit. If the dates apply to the Sandia points themselves, they are the oldest dated artifacts in America, much older than Folsom points. Hibben (1941, p. 31) has stated that Sandia points “occur sporadically from southeastern Colorado to central Texas,” but the present authors are aware of only a few possible Sandia points in this State, all of them in private collections from the High Plains (Llano Estacado). Lop-sided specimens of more common Texas types may be mistaken for Sandia points.
SAN PATRICE POINTS
(Plate 109, M-EE)

DESCRIPTION

Outline: Triangular blade, often stubby, with edges straight, convex, or concave; occasionally, blade is leaf-shaped (AA). Shoulders weak, often absent. Blade sometimes beveled on right or left edge of both faces (Y) but more often all four edges appear steep because of removal of center of stem and blade by thinning or fluting (note thinned area in drawings S-EE and in P, Q). Stem edges sometimes cut inward with notches (M, N, Q, W, X, AA, DD), otherwise parallel or somewhat contracted. Some stem edges are concave (O, R, S-V, Y, Z, BB, CC, EE), but since all stems are smoothed by grinding, such concavities appear to be due to excessive grinding in the same manner as on some Clovis, Folsom, Meserve, and Plainview points (Plates 85, 92, 104, 116). Bases always concave, often deeply.

Dimensions: Total length about 2 to 5 cm., average about 3.5 cm. Maximum width across shoulders about 2 to 3.2 cm. Flutes ½ to 2/3 of total length.

CULTURAL AFFILIATIONS

Undefined Archaic complex in northwest Louisiana and East Texas Aspect, but rare in latter. Probably some of these specimens are simply re-chipped Clovis points (Plate 85), but most appear complete in original form, particularly those with notched-in stems. Thus an interesting possibility that fluting principle survived much longer in this area than elsewhere. Some resemblance to Paisano points (Plate 109, A-L) but these never smoothed or fluted and there is no known connecting link across the several hundred miles of Central Texas.

DISTRIBUTION

Northwest Louisiana, northeast Texas, eastern Oklahoma; probably Arkansas.

ESTIMATED AGE

Difficult to estimate other than in Archaic Stage.

REFERENCES

Webb, 1946, pp. 13-17 and Plate 1, Nos. 7-19; 1948, pp. 230-231.
SCOTTSBLUFF POINTS
(Plate 118)

DESCRIPTION

Outline: Triangular to leaf-shaped blade, edges straight to convex. The edges are sometimes parallel for at least half the length of the blade (C, H, J, L-O, R). Shoulders small but definitely cut inward at right angle to blade, or slanting forward slightly; barbs absent. Stem essentially a rectangle but edges may expand a little (E-I, K, N, R). Base usually quite straight but may be very slightly concave (E) or convex (I, K). Stem edges commonly ground smooth. Blade faces often chipped with parallel scars running across (B, D, H-J, N-R), or with matched pairs of scars meeting in a central ridge (C). Whether regularly or irregularly chipped, Scottsbluff points ordinarily have a "fat" feel due to their being a thick oval in cross-section; a few are thin and flat (D, E).

Dimensions: Total length about 5 to 15 cm. Maximum width usually 2.5 to 3.5 cm.; such narrow specimens as C, G, very unusual. Stems vary from 2 to 3 cm. in width and 1.2 to 2.5 cm. in length. Stems thus from about 1/4 to 1/10 or less of total length.

CULTURAL AFFILIATIONS

Like Plainview points, the Scottsbluff type is found widely in the Great Plains region, sometimes in association with extinct species of bison and geological circumstances which indicate an early post-glacial age. The largest series of points from individual sites are those from Eden Valley in western Wyoming (Moss, et al., 1951) and the Sage Creek or Horner Site near Cody, Wyoming (unpublished). Other such associations occur in Nebraska (Davis, 1953). In Texas nearly all known specimens are in surface collections, some primarily of material belonging to the Archaic Stage, others of isolated nature.

DISTRIBUTION

Found in all parts of Texas except Trans-Pecos and most of Coastal area, but always infrequently. Appear to be concentrated in northeast Texas in general area of Sulphur and upper Sabine River systems, where about half the known specimens in Texas are found. Also occur in northern Louisiana and Arkansas and probably more widely in eastern United States, as well as throughout the Great Plains from Texas and New Mexico to south-central Canada.

ESTIMATED AGE

6000 or 7000 B. C. to 2000 B. C., but difficult to estimate upper limits until type has been adequately studied in distribution and association.

REFERENCES

Krieger, 1947a; Wormington, 1948.
**SHUMLA POINTS**

*(Plate 119)*

**DESCRIPTION**

Outline: Small triangular blade with edges sometimes convex but usually straight, concave, or recurved. Almost always barbed, from short (F, K) to long, sweeping out laterally (L, M, S, T), or extending into line with stem base (D, G-J, O-R, U, X-CC). Stem edges more or less parallel, may expand or contract somewhat. Base usually convex, but may be straight (C, G, H, L, Q, T) or, rarely concave (N). Blade edges frequently serrated (A, M, N, X).

Dimensions: Total length ranges from about 3 to 9 cm. but most fall between 4 and 6 cm. Maximum width about 2.5 to 5 cm. but most fall between 3 and 4 cm. Stems fairly uniform at 1 to 1.5 cm. wide and 1 to 1.5 cm. long; about \( \frac{1}{6} \) to 1/6 of total length.

**CULTURAL AFFILIATIONS**

Closely linked with Langtry points (Plate 98) as a major type of Pecos River Focus. Both types also appear as minor elements in Falcón Focus and are rare in Edwards Plateau Aspect.

**DISTRIBUTION**

Centered about Pecos-Rio Grande confluence area, becoming less frequent down Rio Grande and Nueces River in Southwest Texas. May also extend into Big Bend and northern Coahuila to west of Pecos River mouth.

**ESTIMATED AGE**

An unknown time before Christ to 700 or 800 A.D.

**REFERENCES**

Taylor, 1948, Plate 9, D.

**TAYLOR THINNED BASE POINTS**

See Tortugas points (Plate 120).
TORTUGAS POINTS

(Plate 120)

DESCRIPTION

Outline: Large triangular blade with no stem and edges usually straight to slightly convex; occasionally they may be slightly concave or recurved (K, T, U). Very frequently beveled along right edge of both faces; occasionally beveled along left edge or on all four edges (K, M). Bases straight to concave as a general rule; slight convexity may be allowed (T) but definite convexity would place similar specimens in Abasolo type (Plate 79). Thinning of base common, with short longitudinal flakes removed, sometimes large flakes giving effect like fluting (D, F).

Dimensions: Length about 3.5 to 8 cm., maximum width about 2 to 4 cm., but majority of fairly uniform size (like M-O, Q-Y). Smallest ones overlap in length with Matamoros points (Plate 103) but are tentatively classed as Tortugas because of width and weight (A, C, F).

CULTURAL AFFILIATIONS

Major type, with Abasolo points, of Falcon Focus, continuing into Mier Focus along with their two smaller counterparts, Matamoros and Catán points. Occurs as minor type in Aransas Focus, Edwards Plateau Aspect, and Pecos River Focus, all of Archaic Stage. Occurs in association with pottery in Neo-American Stage only in Alto Focus in East Texas; however, it occurs only very rarely if at all in the Archaic Stage of East Texas.

DISTRIBUTION

Widely spread in Coastal, Central, and eastern part of Trans-Pecos Texas, extending to Neches River valley in East Texas, but common only in Southwest Texas.

ESTIMATED AGE

Possibly 4000 B.C. to 1000 A.D., based partly on terrace associations in lower Rio Grande valley.

REFERENCES

Kelley, 1947a, refers to “Baird Beveled Blade” and “Taylor Thinned Base” points in connection with the Edwards Plateau Aspect, while in Southwest Texas he coined a third name, “Tortugas Triangular Blade” (1947a, p. 104). The present authors have found it impossible to distinguish between these three groups of triangular, beveled points in form or distribution, and have therefore grouped them into a single type. The name Tortugas is used for this type, since it was coined for Southwest Texas, where this form is very common and includes all the variations of the “Baird” and “Taylor” groups found in Central Texas. The specimens called “Baird Beveled Blade” and “Taylor Thinned Base” at the Davis Site in East Texas (Newell and Krieger, 1949, pp. 168-170 and Fig. 59, A-K) should now be classed as Tortugas points.
TRAVIS POINTS
(Plate 121)

DESCRIPTION
Outline: Slender triangular to leaf-shaped blade, edges straight to convex. Many specimens have tip slimmed down to needle-like point (E, F, H, I, AA-CC). Shoulders very slight and rounded. Stem usually rectangular with parallel edges, but may expand or contract slightly. Base usually straight but may be slightly concave or convex.

Dimensions: Total length about 4.5 to 9 cm., average about 7 cm. Maximum width quite uniform at about 2 to 2.5 cm., seldom more or less. Stem width about 1.5 to 2 cm. Stem length fairly uniform at about 1.5 to 2 cm., 1/5 to 1/3 of total length.

CULTURAL AFFILIATIONS
A major type of Edwards Plateau Aspect, Archaic Stage. Overlap in shape and other features with several other types of Edwards Plateau Aspect may cast doubt on validity of Travis type, but it was felt that in practice it could usually be distinguished. Some closely resemble Angostura points (Plate 80) in outline, but stems generally more prominent and shorter, and lack smoothing. Some overlap with Bolivian points (Plate 81) but lacks barbs and wedging down of stem to thin basal edge. Specimens with concave bases (AA-DD) resemble Darl points (Plate 86) but are larger and lack beveling and stem smoothing. Travis points closely resemble some Nolan (Plate 108) in outline but lack beveled stems. They are also narrower and have much less prominent shoulders and barbs than Lange points (Plate 97).

DISTRIBUTION
Mainly Central Texas, possibly extending into other sections less frequently.

ESTIMATED AGE
Full span of Edwards Plateau Aspect, possibly 4000 B. C. to 500 or 1000 A. D.

REFERENCES
None. “Strawn Stemmed” (Kelley, 1947b, Plate 14, C) may be included.

TRINITY POINTS
(Plate 82, V-HH)

DESCRIPTION
Outline: Blade triangular with edges straight to convex. Shoulders poorly developed due to stem being formed by two long shallow notches, crudely chipped. Stem broad, bulging laterally so as to align with blade edges, or nearly so. Base straight to strongly convex. Stem edges sometimes smoothed, base occasionally so.

Dimensions: Total length about 3 to 6 cm., average 4 to 5 cm. Maximum width across shoulders or stem, ranging from 2...
to 2.5 cm. Stem $\frac{1}{4}$ to $\frac{1}{3}$ of total length, occasionally nearly $\frac{1}{2}$.

**CULTURAL AFFILIATIONS**

A major type of Carrollton Focus, Archaic Stage. Appears occasionally in East Texas Aspect. Shallow side notches somewhat resemble those of Ensor points (Plate 90) but notably longer, and stems more bulbous. Stems resemble those of Palmillas and Williams points (Plates 111, 124) but general proportions and workmanship quite distinct, as well as distribution.

**DISTRIBUTION**

Apparently most common in Dallas area in valleys of East Fork and Trinity River, extending into northeast Texas and southward toward Brazos River.

**ESTIMATED AGE**

2000 to 1000 B.C. (Crook and Harris, 1952).

**REFERENCES**

Stephenson, 1949b; Crook and Harris, 1952; 1954a, p. 3, Plate 1, Nos. 5-9, who call type “Trinity Notched”. Present description follows Crook and Harris more closely than Stephenson.

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**UVALDE POINTS**

(Plate 122)

**DESCRIPTION**

Outline: Triangular to leaf-shaped blade, edges straight to convex, rarely concave (H, N). Shoulders prominent, rounded, or with good barbs. Stem expands strongly, sometimes being as wide as shoulders. Bases have deep U-shaped concavity similar to Pedernales points (Plates 113-115) but stems are much shorter and flare outward more. Blade edges sometimes serrated (BB).

Dimensions: Total length about 4 to 10 cm., average about 6 cm. Maximum width 2 to 3.5 cm., stems 1.5 to 2 cm. wide and $\frac{1}{4}$ to $\frac{1}{3}$ of total length.

**CULTURAL AFFILIATIONS**

A minor type of Edwards Plateau Aspect. Similar to Frio points (Plate 93) but blades longer and narrower, stems not as wide or as flaring; the stem tips point downward rather than outward and the central notch of Frio points is missing. Also similar to Martindale points (Plate 102) but lack the two-curve “fish-tail” base of the latter. Judgment between these three types would be difficult in some cases, however.

**DISTRIBUTION**

Primarily Central Texas, extending toward central Coastal area in lower Guadalupe River valley, and toward Pecos River-Rio Grande confluence area, where the few specimens may be intrusive from Central Texas.

**ESTIMATED AGE**

Some part of span 4000 B.C. to 1000 A.D. More restricted distribution may indicate it is not as old as some other Edwards Plateau types.

**REFERENCES**

None.
WELLS POINTS
(Plate 123)

DESCRIPTION

Outline: Slender triangular blade with edges usually straight, sometimes slightly convex. Shoulders small, sometimes missing on one or both edges, occasionally jut out (A, E, J, Q, R, BB, FF), but not barbed. Most characteristic feature is very long stem, usually contracted but may approach being parallel-edged (C-F, T, DD, EE). Base nearly pointed in some cases but rounded in others; occasionally concave (T, BB, EE, FF, HH). Stem edges usually ground smooth. Blade edges often serrated (D, M, O, P, CC, DD).

Dimensions: Total length 4.5 to 8 cm., most being 6 or 7 cm. Maximum width 1.5 to 2.5 cm., seldom more (Y) or less (C). Stem often ½ of total length, seldom less than ¼.

CULTURAL AFFILIATIONS

Primarily East Texas Aspect of Archaic Stage, surviving into Alto Focus of Neo-American Stage, the only known association with pottery. Also occurs infrequently in Edwards Plateau Aspect, Archaic Stage.

DISTRIBUTION

Central part of East Texas, extending westward into Central Texas.

ESTIMATED AGE

About 1000 B. C. to 1000 A. D. or part thereof.

REFERENCES

Newell and Krieger, 1949, p. 167 and Fig. 58, Q-W. Probably includes the "Sisterdale Shouldered" points of Stephenson (1949b).

"WHEELER LEAF POINTS"

Illustrated by Crook and Harris (1954a, Plate 1, Nos. 17-19) as a type of the Carrollton Focus, Trinity Aspect of Archaic Stage. They include slender triangular points with both straight and convex bases, similar to those which the present authors have included in the types Pandora (Plate 112) and Refugio (Plate 117).
WILLIAMS POINTS
(Plate 124)

DESCRIPTION


Dimensions: Total length about 5 to 8 cm. Maximum width 2.5 to 5 cm., most between 3 and 4 cm. Stems usually between 2 and 2.5 cm. wide and ¼ to 1/6 of total length.

CULTURAL AFFILIATIONS

A major type of Edwards Plateau Aspect. Similar to Palmillas type (Plate 110), which also has bulb-shaped stem, but larger, broader, better barbs, and much more restricted in distribution. Stems not as broad or straight-edged, nor blades as straight-edged, as those of Castrovillie type (Plate 83). Also similar to Marcos type (Plate 100), which has straighter base, deeper notches.

DISTRIBUTION

Common in Central Texas, extending infrequently into East and Coastal Texas.

ESTIMATED AGE

4000 B. C. to 1000 A. D. or greater part thereof.

REFERENCES

None.
YARBROUGH POINTS  
(Plate 125)

DESCRIPTION

Outline: Small, slender triangular blade with edges straight to slightly convex, sometimes asymmetrical. Shoulders from small to prominent, not barbed. Stem edges parallel to somewhat expanded and often ground smooth. Base usually straight but may be slightly concave or convex. Blade sometimes beveled, usually along right edge of both faces.

Dimensions: Total length about 3.5 to 8 cm., most between 5 and 6 cm. Maximum width 1.6 to 2.5 cm., most about 2 cm. Stem width 1 to 1.5 cm. and stem length consistently about \( \frac{1}{5} \) to \( \frac{1}{4} \) of total length.

CULTURAL AFFILIATIONS

A major type of East Texas Aspect, Archaic Stage, continuing into association with pottery in Alto Focus and perhaps other foci of Gibson Aspect, Neo-American Stage. Some evidence that it may also survive in some foci of Fulton Aspect. Occurs in Elam Focus of Trinity Aspect, and apparently extends from late Edwards Plateau Aspect into early Central Texas Aspect in same manner as Darl points. It is closely related to the Darl type (Plate 86) but lacks the extreme slenderness of the latter, the shoulders are more prominent, the base is more consistently straight (rather than concave), and the blade is less frequently beveled. In general, the smaller specimens of both types are easier to distinguish than the larger ones (compare bottom rows of Plates 86 and 125).

DISTRIBUTION

Common in East Texas, decreasing toward west in North-Central and Central Texas. Occurs in Oklahoma.

ESTIMATED AGE

Possibly 500 B. C. to 1000 A. D. or somewhat later.

REFERENCES

Newell and Krieger, 1949, p. 168 and Fig. 57; Miller and Jelks, 1952, pp. 172-175 and Plate 22; Bell and Hall, 1953; Crook and Harris, 1954a, p. 11 and Plate 6. Probably includes, in part, the “Sterrett Stemmed” points of Stephenson (1949b).
ARROW-POINT TYPES

ALBA POINTS
(Plate 126, rows A-C)

DESCRIPTION
Outline: Triangular blade with edges usually concave or recurved, seldom straight. Shoulders wide, outflaring, usually barbed. Stem edges usually parallel, occasionally contracted or expanded slightly. Base straight or slightly convex. Blade edges sometimes finely serrated.

Dimensions: Total length 1.8 to 3.5 cm. Maximum width quite uniform at about 1.5 cm., seldom more or less. Stem length about 0.7 cm. on average, or 1/4 to 1/5 of total length.

CULTURAL AFFILIATIONS
A major type of Alto Focus, occurring also in Gahagan, Haley, and Spiro Foci of Gibson Aspect, and in Wylie, Henrietta, and Galveston Bay Foci, all of Neo-American Stage. Appears in East Texas Aspect of Archaic Stage, probably shortly before pottery appears in this area.

DISTRIBUTION
All of East Texas and adjacent states; southward to Coastal plain; and westward with decreasing frequency into North-Central and Central Texas.

ESTIMATED AGE
About time of Christ to 1200 A. D. or later.

REFERENCES
Referred to as "Alba Barbed" points by Krieger, 1946, p. 115 and Fig 7; Newell and Krieger, 1949, pp. 161-162 and Fig. 56; Stephenson, 1952, Fig. 95, row E; Miller and Jelks, 1952, p. 178 and Plate 25; Jelks, 1953, Plate 19, F-H; Ford, 1952, p. 115 and Fig. 45; Wheat, 1953; Bell and Hall, 1953.

BASSETT POINTS
(Plate 126, rows D-F)

DESCRIPTION
Outline: Very small triangular blades with edges usually straight, sometimes slightly convex or concave. Occasionally, tip is slimmed down to needle sharpness. Tiny pointed stem is about equal in size to the two barbs (rows D, E); when barbs are rather long, stem is like a tiny protrusion in middle of a deeply concave base (row F, 2nd, 5th, 6th). Very thin and finely chipped artifacts with exceedingly fine edge serration common.

Dimensions: Total length about 1.7 to 4.2 cm., but few more than 3.3 cm. Maximum width about 1.2 to 1.8 cm., seldom more or less. Stems 0.1 to 0.5 cm. long, seldom more than 0.3 cm.

CULTURAL AFFILIATIONS
A common type in Belcher and Texarkana Foci, occurring less frequently in Titus Focus, all of Fulton Aspect, Neo-American Stage.

DISTRIBUTION
Northeast corner of Texas and adjacent parts of Louisiana and Arkansas.

ESTIMATED AGE
1200 to 1500 or 1660 A. D.

REFERENCES
Referred to as "Bassett Pointed Stem" by Krieger (notes) and Webb, 1948.
BONHAM POINTS
(Plate 127, rows A-C)

DESCRIPTION
Outline: Slender triangular blade with edges usually straight but sometimes slightly concave or recurved; occasionally, slightly convex. Shoulders sometimes squared but usually have small barbs. Stem very narrow and parallel-edged. Base straight or slightly convex. Blade edges sometimes finely serrated.

Dimensions: Total length about 2 to 4 cm., occasionally 4.5 cm. Maximum width 1 to 1.5 cm., seldom as much as 2 cm. Stem length quite uniform at about 0.5 to 0.7 cm., 1/4 to 1/6 of total length.

CULTURAL AFFILIATIONS
A common type of Sanders Focus, occurring also in Spiro Focus or "late phase" thereof. May belong to other foci in areas farther west. Similar to Alba points (Plate 126) differing chiefly in narrower blade with edges usually straight rather than concave or recurved, and narrower stem. The stems of Bonham points are only 0.3 to 0.5 cm. wide, those of Alba points 0.5 to 0.8 cm.

DISTRIBUTION
Northern part of East Texas, especially Red River valley, eastern Oklahoma, and North-Central Texas. A few specimens from northern part of Central Texas and possibly as far west as Pecos River.

ESTIMATED AGE
800 to 1200 A.D.

REFERENCES
Referred to as "Bonham Barbed" by Krieger, 1946, p. 185 and Plate 22, C; Bell and Baerreis, 1951, Plate 7; Bell and Hall, 1953.

CLIFFTON POINTS
(Plate 127, rows D, E)

DESCRIPTION
Outline: Roughly triangular blade, crudely chipped, often modified on only one face, or on one face more than the other. Shoulders may project at right-angle but often are difficult to distinguish from the short, pointed stem. Blade edges may be fairly straight but often convex, concave, or asymmetrical.

Dimensions: Total length 2 to 4 cm. Maximum width about 1.5 to 2 cm., seldom more or less. Stem varies from barely visible to about 0.5 cm. in length.

CULTURAL AFFILIATIONS
A common type of Henrietta Focus, also occurring in Central Texas Aspect and possibly Rockport Focus, all in Neo-American Stage.

DISTRIBUTION
Primarily a broad north-south belt across Texas from upper Red River to central Gulf coast. Most frequent in north, decreasing toward south.

ESTIMATED AGE
1200 to 1500 A.D. in Henrietta Focus; probably about same elsewhere.

REFERENCES
Referred to as "Clifton Contracting Stem" by Krieger, 1946, pp. 115-116 and Fig. 7, P-S; Miller and Jelks, 1952, Plate 24, No. 3; Jelks, 1953, Plate 19, I-K.
CUNLEY POINTS
(Plate 128, rows A, B)

DESCRIPTION
Outline: Triangular blade with edges straight or concave and long barbs extending downward or flaring outward. Stem parallel-edged or slightly expanded. Base concave, from shallow curve to deep U-shaped notch.
Dimensions: Total length about 2 to 4.5 cm. Maximum width about 1 to 2 cm. Stems 0.4 to 0.7 cm. wide and length about same. Stems from 1/6 to 1/6 of total length.

CULTURAL AFFILIATIONS
So far, definitely associated only with Allen Focus of Fulton Aspect in Historic Stage. Therefore, probably made by Caddoan tribes of Hasinai branch.

DISTRIBUTION
Central part of East Texas, principally in Cherokee, Anderson, and Henderson Counties. Found infrequently northward at least as far as Red River and westward into Central Texas.

ESTIMATED AGE
1600 to 1800 A.D.

REFERENCES
None.

FOYLE FLAKE POINTS
See Perdiz points (Plate 131).

FRESNO POINTS
(Plate 128, rows C-E)

DESCRIPTION
Outline: Simple triangles with straight to slightly convex edges, bases usually straight but may be concave or slightly convex. Usually finely flaked on both faces but occasionally one face is smooth fracture plane of original chip, only slightly modified if at all. Rarely, edges are finely serrated.
Dimensions: Length about 2 to 3.5 cm., seldom more or less. Width 1 to 2 cm., occasionally a little more.

CULTURAL AFFILIATIONS
Central Texas Aspect, Bravo Valley Aspect; Galveston Bay, Rockport, Brownsville, Mier, Henrietta, Wylie, and probably other foci in Neo-American Stage. Occurs at Spanish Fort and Womack Sites on Red River, which belong to Historic Stage but also produce some late prehistoric material. Grades into Turney type (Plate 134), which belongs to historic Allen Focus in East Texas. Also grades into Talco type of Titus Focus (Plate 133) and Stair type (Plate 132).

DISTRIBUTION
Practically statewide, lacking only in easternmost counties next to Louisiana.

ESTIMATED AGE
Possibly 800 or 900 A.D. to 1600 A.D. or later.

REFERENCES
Described at Harrell Site, Young County, by Krieger, 1946, pp. 115-116 and Fig. 7, I-L, but not named. Referred to by Kelley (1947b, p. 122 and Plate 13) as "Fresno Triangular Blade". Also Shackelford, 1951; Miller and Jelks, 1952, p. 177 and Plate 25, row 3; Jelks, 1953, p. 199 and Plate 19, T. The points described by Wheat (1953, p. 203 and Plate 35) as "Kobs Triangular" should probably be included.
HARRELL POINTS
(Plate 129)

DESCRIPTION

Outline: Triangular points with edges straight to slightly convex. Bases straight to deeply concave. Two small side notches occur, from ¼ to ½ the distance from base toward tip. Two sub-groups or sub-types may be recognized: those with a third notch in center of base, whether this is straight or concave (rows A-C); and those without a base notch (rows D-F). In Texas, at least, there appears to be no difference in distribution or time between these two sub-types, although a wider study in the Plains and Southwest United States may show significant differences.

Dimensions: Length 1.5 to 3.5 cm. Maximum width about 1.2 to 2 cm. Notches (both at sides and at base) usually 0.2 to 0.3 cm. deep.

CULTURAL AFFILIATIONS

A major type in Antelope Creek Focus; one of several types in Henrietta and Wylie Foci. Occurs widely in Panhandle-Plains area where no definite complexes have been recognized. Also of general distribution in Great Plains from northern Texas to Canada, east to Mississippi valley, and west to Southwest, always associated with agriculture and pottery-making. In far western states and Northwest, occurs in late horizons without agriculture or pottery.

DISTRIBUTION

See above paragraph. In Texas the type occurs across the northern parts, extending southward to the upper Brazos and Trinity River drainages, with occasional specimens farther south. Unknown in East Texas except for rare, probably intrusive, specimens.

ESTIMATED AGE

In Texas, perhaps 1100 to 1500 A. D., not known to be associated with historic complexes. Elsewhere, may be considerably older.

REFERENCES

Described, without name, by Krieger, 1946, pp. 45, 115 and Fig. 7, A-H; Watson, 1950, p. 39 and Plate 3; Bell and Baerreis, 1951, pp. 64-65, 79, 82, 84 and Plates 11, 14, 15; Stephenson, 1952.
HAYES POINTS
(Plate 130, rows A-C)

DESCRIPTION
Outline: Slender triangular blade with edges usually concave or recurved, occasionally straight, rarely convex. Some are square-shouldered without real barbs, but others have barbs sweeping out laterally rather than pointing downward. Stems are bulb-shaped in some cases, but are often featured by a diamond shape from which tiny protrusions emerge on one or more edges. Blade edges sometimes finely serrated, and tips may be sharply incut (row B, second from right; row C, first and fourth from left).

Dimensions: Total length about 3 to 5 cm. Maximum width about 1.5 to 2 cm. Stems quite uniform in width and length, 0.5 to 0.8 and 0.6 to 1 cm., respectively. Stems about 1/4 to 1/6 of total length.

CULTURAL AFFILIATIONS
Characteristic only of Haley Focus in Gibson Aspect, but may occur as minor type or intrusion in late phases of Alto, Gahagan, and Spiro Foci. Similar to Alba points (Plate 126) except for stem shape and incut tips, and to Bonham points (Plate 127) except for stem shape and general proportions.

DISTRIBUTION
Common only in area of great bend of Red River, in adjacent corners of Texas, Arkansas, Louisiana, and possibly Oklahoma.

ESTIMATED AGE
Same as Haley Focus, possibly 800 to 1200 A.D. or part thereof.

REFERENCES
Newell and Krieger, 1949, p. 162 and Fig. 56, I-L. These authors point out the near-identity of Hayes points and the common form of the classic Teotihuacan culture in central Mexico, the only real difference being that the Mexican specimens are almost always obsidian rather than flint.

LIVERMORE POINTS
(Plate 130, rows D, E)

DESCRIPTION
Outline: More or less of a cross, due to very slender, incut blade, widely flaring shoulders, and narrow stem. Base pointed or rounded. Blade edges frequently serrated, often some teeth considerably longer than others.

Dimensions: Total length about 2.5 to 5 cm. Blade 0.5 to 1 cm. wide, maximum width across flaring shoulders about 1.2 to 3 cm. Stem may be about same width as blade, sometimes less, sometimes more.

CULTURAL AFFILIATIONS
A major type of the Livermore Focus, extending intrusively into Mesilla Phase of Jornada Branch.

DISTRIBUTION
Principally in central part of Trans-Pecos Texas.

ESTIMATED AGE
Some part of span 800 to 1200 A.D.

REFERENCES
Kelley, Campbell, and Lehmer, 1940, pp. 30, 163, Fig. 3, and Plates 8, 20.
MAUD POINTS  
(Plate 131, rows A, B)  

DESCRIPTION  
Outline: Slender triangular points with edges usually straight, sometimes recurved with constriction near middle. Bases deeply concave to deeply V-shaped. Commonly very finely chipped, thin, flat, with edges minutely serrated.  
Dimensions: Length about 2 to 5.5 cm. Maximum width quite uniform at 1 to 1.5 cm. Basal concavity 0.3 to 0.7 cm.  

CULTURAL AFFILIATIONS  
Common type of Texarkana and Belcher Foci, extending to easternmost components of Titus Focus, all of Fulton Aspect. Similar to Talco points (Plate 133) except for excessive depth of base and edges usually straight rather than recurved.  

DISTRIBUTION  
Northeast corner of Texas and adjacent corners of Louisiana and Arkansas.  

ESTIMATED AGE  
1200 to 1500 A.D. or greater part thereof.  

REFERENCES  
None.  

PERDIZ POINTS  
(Plate 131, rows C-E)  

DESCRIPTION  
Outline: Triangular blade with edges usually quite straight but sometimes slightly convex or concave. Shoulders sometimes at right angles to stem but usually well barbed. Stem contracted, often quite sharp at base, but may be somewhat rounded. Occasionally, specimen may be worked on one face only, or mainly on one face. More variation in size and proportions than in most arrow-point types in Texas. Workmanship generally good, sometimes exceedingly fine with minutely serrated blade edges.  
Dimensions: Total length about 1.5 to 6 cm., the longer specimens overlapping several dart point types in length but much thinner and lighter than specimens classified as dart points. Maximum width about 1.2 to 3 cm. Stems 0.5 to 1.5 cm. long, generally ½ to 1/7 of total length.  

CULTURAL AFFILIATIONS  
A common type in many Neo-American complexes in Texas, such as Bravo Valley and Central Texas Aspects; Henrietta, Wylie, Frankston, Galveston Bay, and Rockport Foci. Frankston Focus, at the western limits of the Caddoan area, is the only focus in the Gibson and Fulton Aspects in which this type occurs, where it is the only arrow-point type.  

DISTRIBUTION  
Most of Texas from Rio Grande in extreme west to Neches River valley on the east; from Red River valley in both Texas and Oklahoma southward to eastern and central parts of Gulf coast.  

ESTIMATED AGE  
Formerly regarded as quite late; now estimated at about 1000 to 1500 A.D.  

REFERENCES  
Kelley, Campbell, and Lehmer, 1940, Plate 20, Fig. 5 (not named); Kelley, 1947b named it “Perdiz Pointed Stem”; also Krieger, 1946, pp. 115-116, 128-129, 135-137 and Fig. 7, V; Miller and Jelks, 1952, p. 177 and Plate 24, No. 2; Stephenson, 1952, Fig. 95, row F; Jelks, 1953, Plate 19, A-E. Points called “Foyle Flake” by some of above authors are included in present definition of Perdiz.
PIEDRAS TRIPLE-NOTCHED POINTS
SAUCIA SPLIT-BASE POINTS
Mentioned by Kelley (1947b, p. 122) as types belonging to Bravo Valley Aspect in extreme western Texas, also occurring at Lehmann Rockshelter in Gillespie County, Central Texas. No descriptions published, both seem similar to Toyah points (Plate 133).

SCALLORN POINTS
(Plate 132, rows A-C)

DESCRIPTION
Outline: Broad to slender triangular blades with edges straight to convex, occasionally concave. Shoulders may be squared but usually well barbed. Stem formed by notching into corners at various angles, making it expand from a broad wedge shape to rounded extremities as wide as the shoulders. Base straight, concave, and convex. Possibly should be divided into two or more types, but these features of stem shape and base intergrade in every possible manner where found in Texas. Blade edges often finely serrated.

Dimensions: Total length about 2.5 to 4.5 cm., rarely longer or shorter. Maximum width at shoulders or base fairly uniform at 1.5 to 2 cm. Stems 1/6 to 1/7 of total length.

CULTURAL AFFILIATIONS
Common in Central Texas Aspect; occurs in Henrietta Focus and probably Rockport Focus.

DISTRIBUTION
More or less a broad central belt through Texas from Red River valley to Gulf coast, but absent in East Texas and eastern and southern extremities of coast. Said to be fairly abundant throughout Oklahoma.

ESTIMATED AGE
Somewhat older than Perdzi points; possibly 700 to 1500 A.D.

REFERENCES
Kelley (1947b, p. 122) mentions “Scallorn Stemmed” type as diagnostic of Austin Focus (of Central Texas Aspect) but provides no description; Krieger, 1946, pp. 97, 115 and Fig. 7, T. U; Miller and Jelks, 1952, pp. 176-177 and Plate 24, No. 1; Jelks, 1953, Plate 18, O-S; Bell and Hall, 1953, p. 9.

SHAFTER SPLIT-BASE POINTS
A type recognized by Kelley in the Bravo Valley Aspect in extreme western Texas, which appears very similar to that described herein as Turney (Plate 134). As the Turney points have been definitely associated only with the historic Allen Focus in the central part of East Texas, and are not recognized so far in the area between East and Trans-Pecos Texas, this similarity needs to be investigated more fully.

STALL POINTS
(Plate 132, rows D, E)
Simple triangular points with both edges and base concave. Possibly variants of Fresno type (Plate 128) but the basic pattern of three concave edges has, in general, a more southern distribution in Texas. While Fresno points are found widely in central, northern, and western Texas, Starr points are more common in the coastal portion and in Southwest Texas, especially in Brownsville and Mier Foci. The basal concavity also is usually considerably deeper than that of Fresno points. The time span is probably about the same as Fresno.
PLATE 132

SCALLORN POINTS

STARR POINTS

0 1 2 3 4 5 6 7 8 9 10 CM.
TALCO POINTS
(Plate 133, rows A-C)

DESCRIPTION
Outline: Slender triangular points with edges occasionally almost straight but usually recurved with constriction approximately in middle. Bases almost always concave. Workmanship extremely fine, blades thin and flat. Edges commonly minutely serrated, tips often slimmed down to needle-like point.
Dimensions: Length about 2 to 5.5 cm. Maximum width 1 to 1.8 cm. Basal concavity 0.1 to 0.4 cm. deep.

CULTURAL AFFILIATIONS
A common type in Titus Focus, Fulton Aspect, large numbers being found in burials. Overlaps somewhat with Maud points (Plate 131) but bases not so deep and edges much more consistently recurved; distribution more restricted. Some overlap also with Turney points (Plate 134).

DISTRIBUTION
Northern part of East Texas, especially in upper drainage systems of Sabine and Sulphur Rivers, extending to Red River.

ESTIMATED AGE
1200 to 1500 A.D., possibly continuing with minor changes into Turney type in early historic times, 1600 to 1700 A.D.

REFERENCES
None.

TOYAH POINTS
(Plate 133, rows D, E)

DESCRIPTION
Outline: Small triangular blades with two side notches anywhere from near base to about middle. Bases originally straight to concave but strongly modified in most cases with a large third notch in center of base. Blade edges often strongly serrated and narrowed above notches.
Dimensions: Length about 1.5 to 2.5 cm. Maximum width 1 to 1.5 cm., or slightly more or less.

CULTURAL AFFILIATIONS
Apparently another name for "Piedras Triple-Notched" points, which Kelley (1947b, p. 122) assigns to Toyah Focus, a division of the Central Texas Aspect which he relates to the Jumano Indian occupation of west-central and Trans-Pecos Texas. Similar to Harrell points (Plate 129) but smaller and more modified in the blade and around corners by notching, incutting, and serration.

DISTRIBUTION
Parts of Trans-Pecos Texas, possibly extending rarely into Central Texas.

ESTIMATED AGE
Late prehistoric; early historic?

REFERENCES
None published. Considerable confusion as to what features distinguish Piedras and Toyah points, and how they are distinguished from "Saucia Split-Base", "Saragosa Notched-Serrate", and "Frisco Base-Notched", all named by Kelley but undescribed.
TURNERY POINTS
(Plate 134, row A)

DESCRIPTION
Outline: Slender triangular blade, edges cut inward just above base, then straight to tip. Base a broad V rather than concave, so that basal tips somewhat like barbs rather than ordinary corners. Very finely chipped, thin, flat, with edges serrated in most cases.
Dimensions: Length about 3 to nearly 6 cm., thus longer than some dart points but much lighter. Maximum width at base about 1.1 to 1.8 cm. Basal concavity 0.3 to 0.5 cm. deep.

CULTURAL AFFILIATIONS
A diagnostic type of Allen Focus in Fulton Aspect, Historic Stage, not known to occur elsewhere. The shorter specimens are very similar to Talco points (Plate 133) but are constricted above base rather than recurved with constriction near middle, and bases more V-shaped. The longer specimens (four in middle of row A) are clearly distinct from Talco and other triangular types.

DISTRIBUTION
Central part of Neches River valley, East Texas, principally in northern Cherokee County.

ESTIMATED AGE
Some part of span 1600 to 1800 A.D.

REFERENCES
None.

YOUNG POINTS
(Plate 134, rows B-D)

DESCRIPTION
Outline: Crudely triangular to leaf-shaped, edges occasionally almost straight but usually strongly convex and often asymmetrical. Made from thin, curved flakes with little modification on either side, usually not enough to flatten the artifacts. Bases straight to convex, seldom concave, often crooked.
Dimensions: Length about 2.5 to 4.5 cm. Maximum width 1.5 to 2.5 cm.

CULTURAL AFFILIATIONS
Common in Henrietta Focus, rare in Central Texas Aspect.

DISTRIBUTION
Concentrated in Young County, upper Brazos River valley, North-Central Texas, with a few in northern part of Central Texas.

ESTIMATED AGE
1200 to 1500 A.D.

REFERENCES
Described but not named by Krieger, 1946, p. 115 and Fig. 7, X-AA.

GAR SCALE POINTS
(Plate 134, row E)

These are merely the bony scales of the alligator-gar fish, found in many archeological sites of the Texas coastal plain and on lower reaches of rivers entering the Gulf. Due to the shape of these scales, they could have been hafted to arrow shafts without modification. Some, however, have the natural stem slimmed down somewhat, as shown by tiny cutting marks.
PLATE IDENTIFICATIONS

Plates 1 to 70 are of Caddoan pottery. Where the pictures are taken from published sources, the bibliographical reference is given in parentheses. The locations of collections named in parentheses are as follows: University of Arkansas Collections, Fayetteville, Ark.; Hampton Collection, formerly at University of Texas, now at Texas Tech Museum, Lubbock; Hodges and Huddleston Collections, at Hodges home near Bismarck, Ark.; Lemley Collection, at Lemley home in Hope, Ark.; Miroir Collection, at Miroir home, Texarkana, Texas; University of Oklahoma Collection, Norman; Proctor Collection, at Proctor home, Arkadelphia, Ark.; Webb Collection, at Webb home and Louisiana State Exhibit Building, Shreveport, La.; Wright Collection, at University of Oklahoma, Norman; Hood, Martin, and Starrett Collections, at Texas Memorial Museum, Austin. The Banister, Cole, Fowler, Hughes, Jackson, Mills, Reese, and Watson Collections are at the Museum of Anthropology, University of Texas, Austin, as gifts or loans. All other specimens are from collections and excavations made by personnel of Department of Anthropology, University of Texas.

Plate 1
Avery Engraved


Plate 2
Avery Engraved


Plate 3
Bailey Engraved

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Plate 4
Barkman Engraved
All from Hatchel Site, Bowie Co.

Plate 5
Belcher Engraved

Plate 6
Belcher Rridged
All from Belcher Site, Caddo Parish, La. (Webb Coll.).

Plate 7
Blakely Engraved

Plate 8
Bowie Engraved

Plate 9
Bullard Brushed

Plate 10
Canton Incised

Plate 11
Cass Appliqued

Plate 12
Clements Brushed
All from Clements Site, Cass Co.

Plate 13
Cowhide Stamped
Plate 14
Crockett Curvilinear Incised
All from Davis Site, Cherokee Co. (Newell and Krieger, 1949).

Plate 15
Crockett Curvilinear Incised
All from Davis Site, Cherokee Co.

Plate 16
Crockett Curvilinear Incised
All from Davis Site, Cherokee Co.

Plate 17
Davis Incised
All from Davis Site, Cherokee Co. (Newell and Krieger, 1949).

Plate 18
Dunkin Incised
All from Davis Site, Cherokee Co. (Newell and Krieger, 1949).

Plate 19
East Incised
A, B, D, F, K, L, East Site, Clark Co., Ark. (Huddleston Coll.).

Plate 20
Foster Trailed-Incised

Plate 21
Friendship Engraved

Plate 22
Fulton Aspect Effigy Bowls

Plate 23
Fulton Aspect Effigy Vessels
Texas Archeological Society

Site, Lamar Co. I, J, J', Belcher Site, Caddo Parish, La. (Webb Coll.).

Plate 24

Fulton Aspect Rattle Bowls and Noded Bowls

Plate 25

Glassell Engraved

Plate 26

Haley Engraved and Handy Engraved

Plate 27

Haley Complicated Incised

Plate 28

Harleton Appliqued

Plate 29

Hatchel Engraved
G, Jaggers Site, Franklin Co. All others from Hatchel Site, Bowie Co.

Plate 30

Hempstead Engraved

Plate 31

Hickory Fine Engraved

Plate 32

Hodges Engraved

Plate 33
Hodges Engraved

Plate 34
Holly Fine Engraved
All from Davis Site, Cherokee Co. (Newell and Krieger, 1949).

Plate 35
Holly Fine Engraved

Plate 36
Hudson Engraved

Plate 37
Hume Engraved

Plate 38
Karnack Brushed-Incised

Plate 39
Keno Trailed

Plate 40
Kiam Incised
All from Davis Site, Cherokee Co. (Newell and Krieger, 1949: See Dunkin Incised).

Plate 41
Killough Pinched
Plate 42
LaRue Neck Banded

Plate 43
McKinney Plain

Plate 44
Maddock Engraved

Plate 45
Maxey Noded Redware

Plate 46
Maydelle Incised

Plate 47
Means Engraved

Plate 48
Military Road Incised

Plate 49
Monkstown Fingernail Impressed and Sanders Plain
All from Sanders Site, Lamar Co.

Plate 50
Nash Neck Banded

Plate 51
Natchitoches Engraved
All from Glendora Plantation, Ouachita Parish, La. (Moore, 1909).
Plate 52
Patton Engraved
All from Allen Site, Cherokee Co.

Plate 53
Pease Brushed-Incised

Plate 54
Pennington Punctated-Incised
All from Davis Site, Cherokee Co. (Newell and Krieger, 1949).

Plate 55
Poynor Engraved
All from Hood Site, Cherokee Co.

Plate 56
Poynor Engraved
All from Hood Site, Cherokee Co.

Plate 57
Ripley Engraved

Plate 58
Ripley Engraved

Plate 59
Ripley Engraved

Plate 60
Sanders Plain
All from Sanders Site, Lamar Co.

Plate 61
Sanders Engraved
All from Sanders Site, Lamar Co.
Plate 62
Simms Engraved

Plate 63
Sinner Linear Punctated

Plate 64
Spiro Engraved
All from Craig Mound, Spiro Site, LeFlore Co., Okla. (Bell, 1953).

Plate 65
Taylor Engraved

Plate 66
Taylor Engraved

Plate 67
Weches Fingernail Impressed
All from Davis Site, Cherokee Co. (Newell and Krieger, 1949).

Plate 68
Wilder Engraved

Plate 69
Miscellaneous Utility Pottery
Plate 70
Miscellaneous Utility Pottery

Plate 71
Goose Creek Plain
Chambers Co. (Mays Island Site; Dow, Stubbs, and Shearer Coll’s.) and Harris Co. (Addicks Reservoir basin; W. A. Atwood, R. B. Worthington, South Mayde Creek, Rowe and Rowe, and M. Whiddon Coll’s.).

Plate 72
Goose Creek Incised
Chambers Co. (Mays Island, Stubbs, and Shearer Coll’s.) and Harris Co. (Addicks Reservoir basin; Atwood, Worthington, and Whiddon Coll’s.).

Plate 73
Rockport Black-on-gray

Plate 74
Central Texas Miscellaneous Pottery

Plates 75, 76
Borger Cordmarked
Vessels from excavations in Canadian River valley. Photographs furnished by Panhandle-Plains Historical Society, Canyon, Texas.

Plate 77
Almagre Points
All from Cave 1, Mrs. Fate Bell Ranch Site, Val Verde Co.

Plate 78
Pogo Points

Plate 79
Abasolo Points
A-C, E, G, K, R, S, U-Y, BB, Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas. D, H, I, P, Q, T, AA, Morhiss Site, Victoria Co. F, M, N, Cave 1, Mrs. Fate Bell Ranch Site,

Plate 80

Angostura Points


Plate 81

Bulverde Points

R, X, Anderson Co. Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 82

Carrollton, Elam, and Trinity Points

Surface collections in various East Texas counties.

Plate 83

Castrovilte Points

I, Cedar Park Site, Williamson Co. L, Kinney Co. (Paul Edwards Coll.). Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basin, Central Texas.

Plate 84

Catan Points


Plate 85

Clovis Points


Plate 86

Darl Points

E, I, P, Yarbrough Site, Van Zandt Co. J, Possum Kingdom Reservoir basin, Young Co. Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 87

Desmuke Points

P, Q, V, W, Y, AA, EE, FF, GG, LaSalle and Live Oak Cos.

Plate 88
Edgewood Points

D, O, Q, R, Cave 1, Mrs. Fate Bell Ranch Site, Val Verde Co. W, Calhoun Co. (Murray York Coll.). DD, Craig Site, Edwards Co. Remainder from various excavated sites and surface collections in East and Central Texas.

Plate 89
Ellis Points

O, Cave 1, Mrs. Fate Bell Ranch Site, Val Verde Co. Remainder from various sites in East, North-Central, Central, and Southwest Texas.

Plate 90
Ensor Points

Q, Bell Co. (Willison Coll.). V, II, Morhiss Site, Victoria Co. Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins.

Plate 91
Fairland Points

C, T, Y, Morhiss Site, Victoria Co. Q, Cedar Park Site, Williamson Co. Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins.

Plate 92
Folsom and Eden Points


Plate 93
Frio Points

A, C, E, O, EE, FF, Cave 1, Mrs. Fate Bell Ranch Site, Val Verde Co. B, G, S, CC, DD, Kinney Co. (Paul Edwards Coll.). Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 94
Gary Points

All from various excavated sites and surface collections in East Texas.

Plate 95
Kent Points

X, BB, Marshall Ford (Lake Travis) Reservoir basin, Travis Co. Remainder from Addicks Reservoir basin, Harris Co.
Plate 96
Kinney Points

Plate 97
Lange Points
L, N, Morhiss Site, Victoria Co. M, Jackson Site, Victoria Co. Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 98
Langtry Points
All from Cave 1, Mrs. Fate Bell Ranch, Val Verde Co.

Plate 99
Lerma Points
X, Marshall Ford (Lake Travis) Reservoir basin. All others from Morhiss Site, Victoria Co.

Plate 100
Marcos Points
D, L, Q, R, T-W, Morhiss Site, Victoria Co. E, G, K, O, Cave 1, Mrs. Fate Bell Ranch Site, Val Verde Co. Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 101
Marshall Points
K, Morhiss Site, Victoria Co. M, N, V, Kinney Co. (Paul Edwards Coll.). Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 102
Martindale Points
All from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 103
Matamoros Points
All from Falcón Reservoir basin, Starr and Zapata Cos., Southwest Texas.

Plate 104
Meserove Points

Plate 105
Montell Points

C, Q, Cave 1, Mrs. Fate Bell Ranch Site, Val Verde Co. W, Kinney Co. (Paul Edwards Coll.). Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 106
Morhiss Points

All from Morhiss Site, Victoria Co.

Plate 107
Morrill Points

N, if-T, V-AA, George C. Davis Site, Cherokee Co. Remainder from various surface collections in East Texas.

Plate 108
Nolan Points

B, E, M, Q, Cedar Park Site, Williamson Co. Remainder from Marshall Ford (Lake Travis) Reservoir basin, Central Texas.

Plate 109
Paisano and San Patrice Points


Plate 110
Palmillas Points

A, C-H, Addicks Reservoir basin, Harris Co. B, T-X, Cave 1, Mrs. Fate Bell Ranch Site, Val Verde Co. I, Q-S, Possum Kingdom Reservoir basin, Young Co. J-P, LL, various sites in East Texas. Y-AA, Morhiss Site, Victoria Co. BB, Cedar Park Site, Williamson Co. CC-KK, Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 111
Pandale Points


Plate 112
Pandora Points


Plate 113
Pedernales Points

Plate 114
Pedernales Points

Plate 115
Pedernales Points
All from Marshall Ford (Lake Travis) Reservoir basin, Travis Co.

Plate 116
Plainview Points

Plate 117
Refugio Points

Plate 118
Scottsbluff Points

Plate 119
Shumla Points
All from Cave 1, Mrs. Fate Bell Ranch, Val Verde Co.

Plate 120
Tortugas Points
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Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas. K, George C. Davis Site, Cherokee Co. L, Cedar Park Site, Williamson Co. M, Kinney Co. (Paul Edwards Coll.). R, Craig Site, Edwards Co.

Plate 121
Travis Points

B, G, I, Buchanan Reservoir basin, Central Texas. Remainder from Marshall Ford (Lake Travis) Reservoir basin, Central Texas.

Plate 122
Uvalde Points

G, S, U, Cave 1, Mrs. Fate Bell Ranch, Val Verde Co. Remainder from Marshall Ford (Lake Travis) and Buchanan Reservoir basins, Central Texas.

Plate 123
Wells Points


Plate 124
Williams Points

E, Cedar Park Site, Williamson Co. P, Buchanan Reservoir basin. Remainder from Marshall Ford (Lake Travis) Reservoir basin.

Plate 125
Yarbrough Points

C, E, I-K, M, W, HH, KK, Yarbrough Site, Van Zandt Co. Remainder from various other East Texas sites.

Plate 126
Alba and Bassett Points

Rows A, B, George C. Davis Site, Cherokee Co. Row C, Possum Kingdom Reservoir basin, Young Co., and Taber Coll., Brown Co. Rows D-F, Taylor Site, Harrison Co., and Russell Site, Titus Co.

Plate 127
Bonham and Cliffton Points

Rows A-C, various sites in East, Central, and North-Central Texas. Rows D, E, Possum Kingdom Reservoir basin, Young Co.

Plate 128
Cuney and Fresno Points

Rows A, B, Allen Site, Cherokee Co., and various Central Texas sites. Rows C-E, Harrell Site, Young Co.; Womack Site, Lamar Co.; Webb Island Site, Nueces Co.
Plate 129
Harrell Points
Most are from Harrell Site, Young Co. Other specimens from Taber Coll., Brown Co.; Chelf Coll., Taylor Co.

Plate 130
Hayes and Livermore Points

Plate 131
Maud and Perdiz Points
Rows A, B, Taylor Site, Harrison Co. Rows C-E, various sites in Central, Coastal, and East Texas.

Plate 132
Scallorn and Starr Points
Rows A-C, various sites in North-Central, Central, and Coastal Texas. Rows D, E, Falcón Reservoir basin, Starr and Zapata Cos.; Cameron Co. (A. E. Anderson Coll.).

Plate 133
Talco and Toyah Points
Rows A-C, Taylor Site, Harrison Co.; Riley Site, Upshur Co.; Cason Site, Morris Co. Rows D, E, Brewster Co. (J. S. Bennett Coll.); Culberson Co. (J. B. Wheat Coll.).

Plate 134
Turney, Young, and Gar-scale Points
GLOSSARY

Abrading stone: A stone, either shaped or unshaped, used for smoothing other objects by abrasion. Thus, arrow shafts, knife handles, shell and stone beads, pendants, etc., may have been ground into shape by rubbing against a coarse-grained abrader. The tips of bone awls were commonly sharpened by rubbing in grooves made in rock slabs or bedrock.

Acculturation: The process of interaction between two or more cultures by which the behavior patterns of one or all of them are modified in a greater degree than in the case of simple diffusion or borrowing of traits.

Adze: A relatively flat and thin cutting implement of stone or shell mounted or hafted at right angles to the handle.

Appliqué: A technique of pottery decoration in which pieces or strips of moist clay are pressed on to the vessel wall before firing, producing a relief ornamentation.

Arrow point: A small, thin, and light point hafted to the end of an arrow shaft. Although popularly known as “bird points” there was no particular connection between such arrows and the hunting of birds; they were also used for all game, large and small, and for warfare. In general, the weight of such points is only a fraction of that of dart points although in dimensions there is considerable overlap.

Artifact: Any object fashioned through human workmanship. In practice, it is usually confined to objects found by archeologists.

Atlatl: A word of Aztec origin, commonly used for the spear-thrower.

Awl: A pointed implement, usually of bone or shell, suitable for making small holes in skins or for sewing coiled basketry by penetrating the foundation.
PARTS OF PROJECTILE POINTS

BLADE SHAPES

STRAIGHT EDGES
CONVEX EDGES
CONCAVE EDGES
RECURVED EDGES
TRIANGULAR
PARALLEL
LANCEOLATE

STEM SHAPES

STRAIGHT
EXPANDING
CONTRACTING
POINTED

STEM BASES

CONCAVE
INDENTED
CONVEX
ROUNDED
STRAIGHT

NOTCHES

SIDE
BASAL
BASAL
CORNER (NARROW)
CORNER (WIDE)

FIGURE 7:
Chart showing names of projectile-point parts
Ax, Axe: A large, thick, bifacially-chipped stone artifact suitable for chopping. It may vary in shape from oval to roughly rectangular or triangular and may or may not have notches chipped into the edges for hafting. Such objects are sometimes referred to as “heavy blades”. See also celts and grooved axes.

Bi-convex: Any artifact, the faces of which are both convex in cross-section.

Bi-face tool: Any stone artifact modified on both faces by chipping.

Bit: The cutting edge of an axe, celt, chisel, or scraper.

Blade: The main body of a knife or projectile point, as distinct from the hafted portion or stem. Old World archeologists generally use the term for long, thin, more or less parallel-edged spalls or prisms struck from cores; New World archeologists generally term these “flakes” or “lamellar flakes”.

Bladelet: A small “blade” in the Old World usage cited above.

Boatstone: A polished-stone artifact shaped more or less like a canoe with rounded or squared ends, usually hollowed out in various ways from the upper or flat side. Probably used as weights tied to underside of atlatls (spear-throwers) to increase centrifugal force through throwing arc; experiments prove that such weights actually give added force and snap to the throw.

Brushing: A technique of finishing the surface of pottery vessels by rubbing with grass or perhaps twigs, leaving the surface covered with striations. As this was usually done on the exteriors only, the interiors being smoothed, and the striations sometimes run in crude patterns, it was probably decorative.

Burnish: To rub a pottery-vessel surface to a high polish with satiny feel.
Burnt-rock midden: A concentrated refuse deposit consisting largely of broken and discarded chunks of hearthstones (usually limestone), together with soil, ash, animal-bone fragments, artifacts, flint scrap, etc. They are very common in Central Texas and range in height from a few inches to 8 feet or more; in extent they may range from 25 feet across to several acres and are usually roughly circular or oval in shape except when found in caves. They have often been referred to as "rock mounds", but since they are merely unintentional accumulations, are more suitably termed middens.

Cambered rim or lip: A vessel lip with convex outer surface meeting the inner surface in a ridge or gable.

Campsite: A place occupied for only a short time.

Celt: An ungrooved polished-stone axe. Usually round or oval in cross-section at middle, one end converging to a bit, the other a blunt poll (petaloid celt). Also refers to a flatter object with the cutting edge flaring out wider than the body (spatulate celt). While the term is often applied to flat, thin, more or less rectangular polished axes with sharp bits, these are termed adzes herein.

Checker or checkerboard weave: A technique of weaving baskets in which the two elements pass one-over and one-under, producing a checkerboard pattern.

Chopper: A heavy, very crudely chipped stone implement with a broad, jagged cutting edge at one end. The other end is usually unchipped and retains the original outer surface or "crust" of the pebble or flint nodule from which the chopper was made; this original surface often fits conveniently into the palm, hence the alternative terms "fist axe" and "hand axe". The term "axe" in this connection usually indicates a thinner and better-made blade at the cutting end; however, all three terms may be used interchangeably.

Cist: A dug pit which may be oval, circular, or irregular in shape, and may or may not be lined with plaster or
stones. Primarily for food storage but sometimes used secondarily for graves.

**Coiled basketry:** Basketry in which a round foundation element of grass stems, twigs, or slats (split twigs) is built up in a continuous spiral. Each circuit is held in place by passing a looping strand over it and binding it to the one below in any of several ways.

**Coiled pottery:** Pottery constructed in much the same way as coiled basketry, and perhaps invented by simulating the latter. From a starting core or disk, rolls of clay are added in a continuous spiral or series of circuits, each one pressed down and pinched on to the preceding one. The seams are then smoothed over with a stone tool or a paddle-and-anvil. If not smoothed over, the pinching of one coil down on another produces a "corrugated" effect.

**Complex:** Any group of cultural traits found together so as to indicate they existed at the same time. Also, groups of traits pertaining to certain kinds of activity, such as hunting complex, burial complex, architectural complex, etc.

**Cordmarking:** A technique of impressing cords into the surface of pottery vessels for decorative effect. The cords probably were wrapped tightly around wooden paddles and thus pressed into the clay in groups rather than singly, although the latter was practiced as well.

**Core, core tool:** A stone, usually flint or obsidian, from which flakes have been removed. When the core has been fashioned into a tool, such as a hand axe, by the orderly removal of flakes, it becomes a "core tool" or "core artifact".

**Corner-tang:** A term applied to knives and drills which have a "tang" or stem at one corner rather than in the usual position in the center of the base. The stem may also be merely off-center enough so that any handle hafted to it would lie at an angle to the medial line of the artifact. The purpose is unknown but an angular handle on certain cutting or drilling implements may
provide a mechanical advantage over a straight handle for some functions.

**Corrugated pottery:** Coiled pottery in which one coil has been pinched on to the preceding one with regular crimps, but the seams and crimps have not been smoothed over in the usual manner, being left as decoration. The entire vessel may be corrugated (as by the Puebloan Indians), or the body may be smoothed and only the neck coils left corrugated. The latter technique is called *neck-banding* and occurs in the Puebloan, Caddoan, and northern Andean regions.

**Dart point:** A point attached to the shaft of a “dart” used with the spear-thrower. Because of the size of these “darts”, from 4½ to 6 feet long, and the power of the throwing stick, these points are considerably heavier than those for arrows, although no exact criteria have been established.

**Dentate stamping:** A decorative technique on pottery, done by pressing the notched edge of a mussel or sea shell (or possibly a finely notched wooden or bone implement) into the still-plastic clay. The fine rows of punctates thus produced will appear similar in cast. The edge of the implement may have been rocked back and forth, producing a dentated *rocker stamping*.

**Diffusion:** The spread of culture traits through their being borrowed by one group from another.

**Digging Stick:** A wooden staff, usually pointed and sometimes fire-hardened, for uprooting plants, bulbs, etc.

**Distal:** The end farthest away from one, when used in reference to something held in the hand. When used in reference to parts of bones (especially limb bones), the distal end is that farthest from the body, as opposed to the *proximal* end.

**Drill:** An implement of chipped stone with a long, slender shaft suitable for making holes in wood, stone, bone, leather, etc.
other workshop debris, etc., and may vary in thickness from a few inches to several feet. See also burnt-rock midden and shell midden.

**Milling stone:** A stone slab on which a mano was used to grind food. In contrast to a *metate*, the grinding motion on a milling stone was rotary rather than back-and-forth, which produced an oval basin rather than a trough. Much more widespread in America than the *metate* and associated with pre-agricultural people for several thousand years, then used by some agricultural people as well. Probably used for grinding nuts, roots, berries and other wild foods.

**Mortar:** A deep, cup-shaped vessel of stone or wood in which seeds, grain, corn, etc., were pulverized with a pestle used with downward force. **Bedrock mortars** are those made in large non-portable boulders or rock outcrops.

**Neck-banding:** See corrugation.

**Negative design:** A design in which the background or undecorated area appears to be the chief design element.

**Negative painting:** A technique of pottery decoration in which the parts of the desired design are covered with wax, grease, clay, or other substance, and the rest of the surface painted. When the covering substance is removed, the design appears in the *unpainted* areas.

**Occipital deformation:** A form of head deformation in which the back of the skull is pressed flat, thus widening it. May be caused accidentally by pressure from cradleboard to which infant's head is bound.

**Ochre:** An earthy, often impure, ore of iron, usually called *hematite* when red and *limonite* when yellow or light brown. Used by Indians for paint.

**Olla:** A globular-bodied vessel with a small neck and mouth. When used for water storage, the small mouth reduces evaporation.
**Overhanging lines:** Horizontal lines cut into the plastic clay of a pottery vessel, with the tool held at a downward angle; the incisions are deepest along their upper sides.

**Oxidizing atmosphere:** Applies to the firing of pottery in such a way that air is permitted to circulate around the vessels. This provides an excess of oxygen and produces shades of red, brown, or yellow pottery, depending in part on the minerals present in the clay, and in part on the temperatures.

**Paddle-and-anvil:** A technique of shaping pottery walls by beating the clay into the desired shape, holding a solid object (the "anvil") against the inner surface and striking the exterior with a small wooden paddle. Also used in some areas as a finishing technique to obliterate the seams of coiled pottery.

**Palette:** A thin tablet of various shapes, with one or more shallow basins in which to hold or mix paints.

**Paste:** The mixture of clay and tempering material with which pottery is made.

**Patina:** A discoloration of stone, obsidian, glass, or metal as the result of exposure to the elements or to chemical actions in the surrounding soil. As different materials patinate at different rates under the same conditions, and some never patinate under any conditions, the amount of patination seen on an artifact cannot be used to measure its age unless the kind of material, local soil conditions, sub-surface drainage, temperatures, etc., are all taken into consideration. However, no such scales have been worked out.

**Pecking:** A technique of shaping an artifact by removing tiny bits with a hard, pointed stone directed against it. The surface will be finely pitted as a result, and may then sometimes be ground or polished, more or less obliterating the peck-marks.

**Pendant:** An ornament perforated for suspension so as to hang lengthwise.
**Percussion chipping:** Chipping or flaking stone by hammering.

**Pestle:** An implement of stone or wood, basically cylindrical in shape, used to pulverize food matter in a *mortar*. It may be tapered, provided with a flanged handle, or otherwise modified from the cylindrical shape.

**Pick:** A roughly chipped stone tool brought to a point rather than to a cutting edge.

**Plano-convex:** Pertains to an artifact with one face more or less flat and the other convex, particularly to flint artifacts on which the original concoidal fracture plane is left smooth and unworked while the humped or convex face is shaped by chipping.

**Pleistocene:** The glacial epoch or Ice Age, during which vast continental glaciers advanced and retreated a number of times. Estimates of its duration range from 500,000 to 1,000,000 years. The last major retreat appears to have occurred about 11,000 years ago in different parts of the world.

**Polished-stone artifacts:** In contrast to *ground-stone artifacts*, which become smoothed through use rather than intent, polished-stone artifacts are those intentionally shaped by abrading and polishing their surfaces. In some cases, these artifacts were first roughly shaped by percussion or pecking, then finished by abrading.

**Polychrome ware:** Pottery painted with two or more colors in addition to the background color. Thus, any combination of three or more colors.

**Prayer stick:** A piece of wood to which may be tied a variety of other objects such as feathers, string, fur, pieces of bone, etc. Used in ceremonies by Puebloan Indians of Southwest; sometimes found archeologically in caves.

**Pressure flaking:** Removal of flakes by applying pressure against the face or edge of a stone artifact with a small *flaking tool*. This was the usual method of finishing such objects as projectile points, knives, drills, etc., after
they had been roughly shaped by *percussion chipping*. Pressure permitted more control over direction and amount of fracturing.

**Projectile point**: A pointed artifact of stone, shell, bone, wood, metal, or bony scales of garfish, hafted to the tip of an arrow, atlatl dart, spear, or lance shaft to facilitate penetration.

**Proximal**: The reverse of *distal*; that is, the end nearest one when used in reference to something held in the hand. When used in reference to parts of bones (especially limb bones), the proximal end is that nearest the body.

**Punctates**: In pottery decoration this refers to indentations made in the plastic clay with a sharp stick, the hollow end of a reed, a blunt tool, or a fingernail. Punctates may also be made in shell and bone artifacts with a sharply pointed implement, such as a *graver*.

**Rabbit stick**: A flat stick or club, curved or recurved in various degrees, 60 cm. (2 feet) or more in length, found widely in dry caves of the Southwest and Mexico, and still used by Hopi Indians to kill rabbits. Also referred to as a type of boomerang (non-returning), "fending stick" (to deflect weapons or spears in warfare), "curved stick", or "curved club". Commonly has sets of parallel incised lines running lengthwise but discontinuously on flat faces.

**Rasp, rasping stick**: An implement notched along edge or face which, when rubbed with a stick, produces a harsh rasping noise. May be made of large animal rib or of wood.

**Recent**: Often used to embrace the post-Pleistocene or post-glacial period, but not an ideal term because in most other languages, "recent" and "modern" are equivalent.

**Reducing atmosphere**: Applies to the firing of pottery in such a way that air is prevented from circulating around the vessels. This results in a reduction of oxygen and tends to produce shades of black and gray pottery. See *oxidizing atmosphere*.
Repousse: A pattern in relief produced by hammering or pressing the reverse side into a mold.

Rocker stamping: A technique of pottery decoration in which a sharp-edged or toothed implement is moved back and forth across the plastic clay, each segment offset from the preceding one, producing a zig-zag line.

Scraper: A plano-convex artifact, usually of stone, with the under side unworked and the upper side chipped into one or more cutting edges. Usually named according to the position of the cutting edge or bit, such as "side scraper", "end scraper", or "oval scraper". A scraper which is very thick near one end may be called "snub-nosed" or "duck-billed", while one which has a high ridge along the centerline may be called "turtle-backed". Scrapers may also be made of potsherds ground to a cutting edge.

Shaft smoother: See abrading stone. The shaft smoother is usually a block of coarse-grained stone with a longitudinal groove suitable for fitting part way around an arrow or atlatl-dart shaft.

Shaft straightener: A stone block shaped like a shaft smoother. Sometimes found in pairs which, if clamped over an arrow, dart, or spear shaft, could be used to bend the shaft into a straight line. Also applies to bone artifacts with a hole through which a shaft could be thrust and the bone used as a wrench to straighten it.

Shell midden: An accumulation of refuse including a large amount of discarded sea shells (oyster, clam, conch, etc.) or fresh-water mussels.

Sherd, potsherd: A fragment of a broken vessel.

Site: Any spot producing evidence of human occupation, directly or indirectly. Thus isolated graves, pictographs, bed-rock mortar holes, etc., are evidence of human occupation in the vicinity even when no camp refuse is found.

Slip: Potter's clay in a very liquid state, used for giving a fine-grained surface to the vessel, suitable for polishing.
Spall: See flake.

Spatulate: Spoon-shaped or spade-shaped. Used in reference to celtS which spread laterally toward the cutting end.

Spear point: A heavy projectile point, usually more than 10 cm. (4 inches) long and usually thicker than a dart point, although there is no accepted scale by which to distinguish the two classes. Presumably hafted to the heavy shafts of spears or lances.

Spear-thrower or atlatl: A flat, thin, wooden implement usually between 45 and 75 cm. (18 and 30 inches) long and several centimeters wide, having a handle or finger holds at one end and a spur at the other. The spur may be carved from the same piece or may be a pointed piece of bone or antler attached in any of various ways; it fits into the butt of the missile to be thrown. The thrower is used with a wide overhead swing and acts as an extension of the arm, adding great power to the thrust. The missiles are commonly called “darts”, an unfortunate term for actually they are more like light spears or javelins. The “darts” are very similar to arrows, but much heavier, being 1.5 to 2 meters (5 to 6.5 feet) long, and two or three times as thick as arrows; they have attached points and are equipped with feathers to stabilize them in flight. The spear-thrower is now known in only a few parts of the world but at one time was probably universal. Archeological data show it to have been in use for many thousands of years before the bow-and-arrow was invented.

Spindle whorl: An object, usually of clay, shaped like a disk or a truncated cone, with a hole through its center. It is fitted on the shaft of a spindle and acts as a stabilizer to reduce wobble. In American archeology, spindle whorls occur in some areas which are made from potsherds, drilled through the center and trimmed around the edges to make round disks.

Spokeshave: A form of scraper, usually plano-convex, with at least one deeply concave edge of suitable size for scraping down wooden shafts or handles.
Stamping: A technique of pottery decoration in which the same object is pressed repeatedly into the plastic clay, leaving a series of identical impressions.

Step-fret: A decorative pattern characterized by right-angular lines, bars, or figures, interlocked in various ways in a continuous belt; particularly, interlocking L-shaped elements.

Stratigraphy: The arrangement of strata (layers, beds, deposits) as to position and order of deposition. Ordinarily, the bottom stratum in a series is the oldest and the top stratum the youngest, although special conditions may at times alter or even reverse this order. The strata may be geological (deposited by natural forces), cultural (due to human occupation), or both. Stratigraphy is an invaluable aid in determining the relative age of cultural material.

Temper: An aplastic material added to pottery clay to reduce its stickiness and to allow steam to escape through the walls when the vessel is fired. If steam cannot escape uniformly, the walls crack or bend. The commonest aplastics in Indian pottery are sand and the following pulverized materials: hard clay, stone (especially limestone and quartz), shell, bone, volcanic ash, sherds from other vessels, etc.

Tinkler: A small metal cone, usually brass, for attachment to clothing, saddles, etc., for ornamentation. A favorite Indian trade item in historic times.

Trailed lines: Broad, shallow incised lines made with a round-nosed tool.

Twilling: A technique of basketry plaiting in which a diagonal pattern is achieved in any of several ways: over-two-and-under-two, over-two-and-under-one, over-three-and-under-one, etc.

Twining: A technique of making basketry in which the weft elements are applied in pairs over the warps. The two weft elements are usually passed on each side of a warp,
then given a half twist to cross the next warp in reversed position. Slight variations may be made to produce simple patterns.

Type: A grouping of artifacts or other culture traits (e.g., details of house construction, burial method, etc.) which represents a pattern distinctive from other such patterns. This specific combination of features should be of some demonstrable historical significance. That is, it should be more than a random grouping of things that look more or less alike, and it should have a particular meaning in terms of origin, development, function, and distribution in time and space in contrast to other such combinations. The criteria by which types are established are variable and discovered by analysis, comparison, and plotting in time and space. Ideally, a type in archeology should have a meaning comparable to that of a species in biology.

Typology: A system of analyzing cultural material into types.

Uniface: An artifact with intentional workmanship on only one face. See plano-convex.

Village site: A relatively permanent occupational area, in contrast to a campsite.

Warp: A passive element in weaving and basket-making, usually of stouter material than the active elements or wefts. In plaiting, both sets of elements are active and the warps and wefts indistinguishable.

Wash: A thin or watery coat of color applied to pottery; to tint lightly and thinly.

Weft: An active element in weaving, as opposed to the warps or passive elements.

Woof: A synonym for weft, now generally obsolete.
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Key to Abbreviations

AAn—American Antiquity. Published by the Society for American Archaeology. Salt Lake City.
FL—Field and Laboratory. Southern Methodist University. Dallas.
LATS-B—Laboratory of Anthropology Technical Series Bulletin. Santa Fe.
MA—Missouri Archaeologist. Published by the Missouri Archaeological Society. Columbia, Missouri.
OP—Oklahoma Prehistorian. Published by the Oklahoma State Archaeological Society. Tulsa.
TR—The Record. Published by the Dallas Archaeological Society. Dallas.
UTP—University of Texas Publication (formerly The University of Texas Bulletin). Austin.

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For a more complete listing of references the reader is referred to Dr. T. N. Campbell’s “A Bibliographic Guide to the Archaeology of Texas.” Archaeological Series, I. University of Texas Printing Division, 1952. This bibliographic guide may be obtained at no cost from the Department of Anthropology, University of Texas, Austin.
NEWS NOTES
THE 1953 ANNUAL MEETING

The 24th annual meeting of the Texas Archeological Society was held on October 31, 1953, at the Museum of the University of Oklahoma in Norman. A get-together was held the preceding evening in the Oklahoma Memorial Union Building. The program was opened with an address of welcome by Dean L. H. Snyder of the University's Graduate College. The following papers were presented:


"Excavations at the Kincaid Shelter", Dee Ann Suhm and Dorothy Garner, University of Texas.

"The Life of Primitive Man as Shown by his Environment", Oren F. Evans, University of Oklahoma.

"Archeology and History of the Falcon Dam Area, Lower Rio Grande Valley", Alex D. Krieger, University of Texas.

A question and answer period on various archeological problems was held at the conclusion of the above papers, and an informal gathering held that evening in the Museum, where the splendid exhibits on Oklahoma archeology were enjoyed by all. A field trip to archeological sites west of Norman was made by some members the following day, Sunday.

A business meeting was held at 1:30 P. M. on October 31, opened by the President, Dr. Robert E. Bell. The Secretary-Treasurer, Edward B. Jelks, read the minutes of the previous (1952) meeting, which were approved by voice vote. The Secretary-Treasurer then initiated new business by reporting on the fiscal condition of the Society. He reported (1) that membership increased from 177 to 236 during the year; and (2) that the Society had a balance on deposit in the First National Bank of Lubbock of $1,480.38 on August 31, 1953. Receipts of dues as of October 31 brought the total assets to about $1,800. The cost of publishing Volume 24 of the Bulletin was estimated at $1,000, which would leave a surplus of about $800 after all bills were paid.
As no Auditing Committee had been appointed to examine the Society's books, it was agreed by voice vote to accept the financial report published on page 261 of the Bulletin, Volume 24, 1953.

The Editor of Publications, Alex D. Krieger, reported that Volume 24 of the Bulletin, with 266 pages, was somewhat smaller than that of 1952 because of the cost of publishing the *Index* earlier in 1953. Zinc cuts were used for the first time for photographic reproductions in the 1953 Bulletin, and not only proved to be of excellent quality but resulted in a considerable saving over copper engravings. Mr. Krieger then spoke about some time-saving methods in preparing manuscripts and illustrations before submitting them to the Editor.

R. K. Harris, chairman of the Nominating Committee, presented a slate of nominees for the various offices. This was adopted by voice vote in lieu of formal balloting. The list of new officers appears in the front of this Bulletin.

Billy Hanks of San Angelo was appointed chairman of a Membership Committee, with a request to develop a plan for increasing our membership. Wilson W. Crook, Jr., of Dallas was appointed chairman of the Arrangements Committee, charged with selecting a satisfactory location for the 1954 meeting.

Following a vote of thanks to the University of Oklahoma and to Robert E. Bell for providing such excellent facilities for this meeting, the formal business was concluded. The President, however, asked for informal reports on local archeological activities, which were given by the following persons:

1. R. K. Harris, on field projects of the Dallas Archeological Society.
2. V. L. Pritchard, vicinity of Weatherford.
3. Carl Compton, the Denton Archeological Society.
4. Albert Field, Lampasas area.
5. Ed Jelks, recent field work and publications by Central Texas Archeological Society in Waco (for Frank Watt).
6. Jack T. Hughes, current projects being carried out by the Panhandle-Plains Historical Society (Canyon).
A RADIOCARBON DATE ON THE FALCON FOCUS

Just as this bulletin was going to press, word was received from the Radiocarbon Laboratory of the University of Michigan that an age determination had been made on charcoal from an excavation made just above Falcón Dam in 1951. This excavation was conducted in Site 78B9-4 by Donald D. Hartle, then field archeologist for the River Basin Surveys, Smithsonian Institution, with headquarters in Austin under Robert L. Stephenson. The occupation zone was buried about 11 feet under the top of the Rosita Terrace (see pp. 136-141 of this volume). The Rosita Terrace in this vicinity rises about 44 feet above the normal level of the Rio Grande and is the middle terrace in the series of three post-glacial terraces found all along the lower Rio Grande valley.

The 11 feet of overburden was removed by bulldozer and the occupation zone excavated by trowel (see Hartle and Stephenson, "Archeological Excavations at the Falcón Reservoir, Starr County, Texas", a mimeographed report of the Smithsonian Institution, 1951). The calculated age of this charcoal is 4650 plus or minus 300 years or about 2700 B. C. This date applies to the cycle of valley filling represented by the Rosita Terrace, which continued to rise for at least 11 feet above the occupation zone before a cycle of valley erosion began. The associated artifacts are typical of Falcón Focus, and the date should fall somewhere in the middle of the total time span of this focus, for its artifacts are also found in the higher and older Zapata Terrace, and on a lower and younger terrace of more recent date about 25 feet high. A preliminary test pit was dug in this site by Jack T. Hughes and assistants in 1950.
REPORT OF THE SECRETARY-TREASURER
OF THE
TEXAS ARCHEOLOGICAL SOCIETY
Report for the twenty-sixth year from September 1, 1953
to October 31, 1954.

RECEIPTS
Balance on August 31, 1953 ......................... $1,480.38
1952 Dues, 4 @ $5.00 .............................................. 20.00
1953 Dues, 183 @ $5.00 ............................................ 915.00
1954 Dues, 31 @ $5.00 ............................................ 155.00
1955 Dues, 1 @ $5.00 .............................................. 5.00
Sale of Bulletins, 36 @ $5.00 and 69 @ $3.00 .......... 387.00
Special sale of Bulletins to Instituto Nacional de
Antropologia e Historia, Mexico .................. 37.00
Sale of Indexes, 13 @ $2.00 ...................... 26.00
Reimbursement for reprints for articles in Vol. 24 155.78
Contributions toward cost of printing Vol. 24 .... 31.00
Interest accrued to savings account at First Federal
Savings & Loan Association, Austin .......... 17.56

TOTAL RECEIPTS ........................................... $3,229.72

DISBURSEMENTS
Abilene Printing & Stationery Co., for printing
350 copies of Vol. 24 ........................................... $1,116.82
Postage and freight ........................................... 87.85
Best Printing Co., Austin, for stationery and
membership cards ............................................. 88.85
Clerical charges, Austin National Bank ........... 3.34

TOTAL DISBURSEMENTS ................................ $1,296.86

Balance on deposit, Austin National Bank,
Austin, Texas, on October 31, 1954 .......... 915.30
Balance on deposit, First Federal Savings & Loan
Association, Austin, Texas, October 31, 1954 ... 1,017.56

TOTAL ASSETS as of October 31, 1954 .......... $1,932.86

EDWARD B. JELKS,
Secretary-Treasurer.
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<td>609 Orange St, Abilene, Texas</td>
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<td>Bell, Robert E., Dept. of Anthropology, University of Oklahoma</td>
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Washington 25, D. C.
THE MIDLAND DISCOVERY

A REPORT ON THE PLEISTOCENE HUMAN REMAINS
FROM MIDLAND, TEXAS

Fred Wendorf
Alex D. Krieger
Claude C. Albritton, Jr.
T. D. Stewart

* * *

1955

The University of Texas Press
Austin, Texas

$3.50
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BULLETIN

of the

Texas Archeological

Society

(Formerly Texas Archeological and
Paleontological Society)

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W. C. Holden: Some Recent Explorations and Excavations in Northwest Texas.
E. B. Sayles: Some Types of Archeological Sites near Abilene, Texas.
George Castor Martin: Notes on Some Texas Coast Campsites and Other Remains.
Rupert Richardson: The Culture of the Comanche Indians.

VOLUME II 1930 $3.00
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The Society calendar begins in October with the Annual Meeting, an event that has taken place since 1929. Archeologists, professional and avocational, get together to share information in research sessions and to hear from nationally renowned luncheon and banquet speakers. Friday is a popular evening for the public forum with high profile speakers and artifact identification. Meetings will be held in Lubbock (08) and Del Rio (09).

Each spring TAS offers sessions of the Texas Archeology Academy. Topics in this series of workshops include Archeology 101 (including a field day), Ceramics: The Stories Pottery Tells, Lithics: Reading Stone Tools, Historic Archeology and Rock Art of Texas. Each Academy features power point presentations, a manual and hands-on activities to reinforce concepts presented. In 2009 sessions will be held in Georgetown, Study Butte, and Lake Jackson. Surveys at the
close of sessions reveal that participants greatly value the information imparted during the workshop and the camaraderie of fellow students.

The summer brings a field school that offers an opportunity for folks to contribute to research about Texas archaeology. The principal investigator is supported by staff and experienced volunteers. Usually around 300 people participate. Newcomers appreciate an orientation session before joining crews in the field. Survey and lab sessions provide other venues for people who want to learn more about the archeological process. The field school in 2009 will be in the Panhandle near Perryton. We offer scholarships to college students and Native Americans. A youth program instructs around 60 students each year.

Publications of the Society include a journal, the Bulletin of the TAS, a quarterly newsletter and two web sites. www.txarch.org is the organizational web site that relates current programs and opportunities. The other web site is www.texasbeyondhistory.net, a venue that offers information in the form of multi-level exhibits. TAS has been a supporting partner of Texas Beyond History since its inception.

For more information about TAS see www.txarch.org or call 800 377-7240.
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