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## Early Human Occupations in South Central and Southwestern Texas: Preliminary Papers on the Baker Cave and St. Mary's Hall Sites

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## Early Human Occupations in South Central and Southwestern Texas: Preliminary Papers on the Baker Cave and St. Mary's Hall Sites

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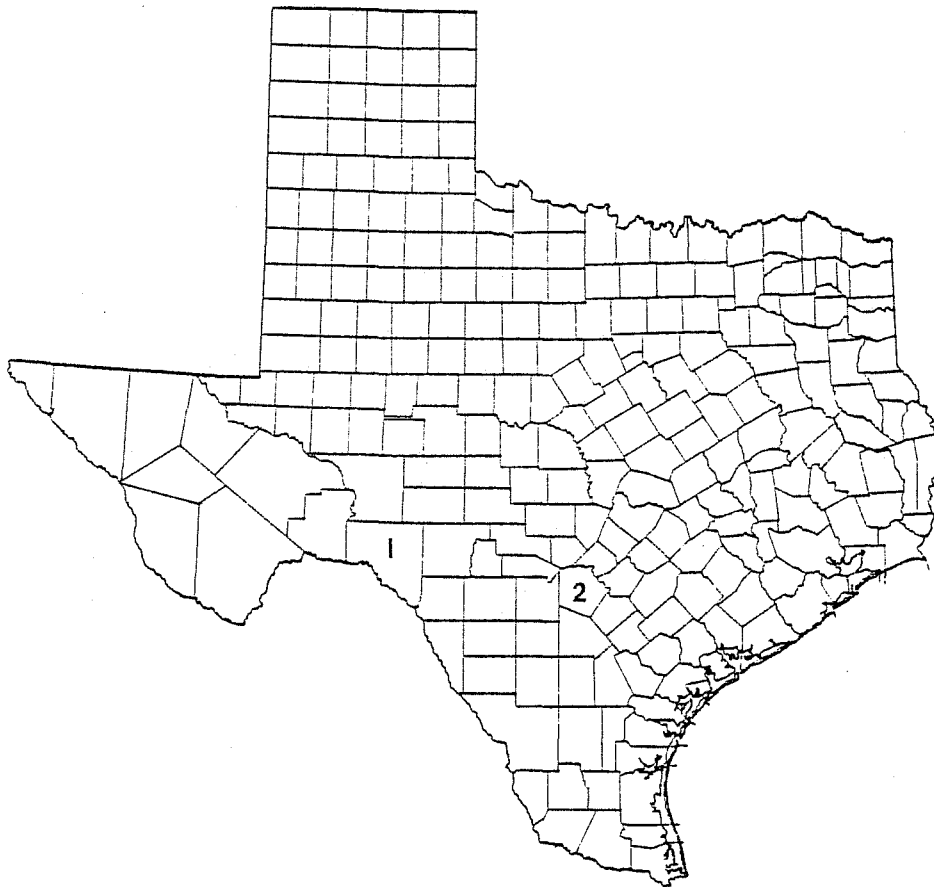
EARLY HUMAN OCCUPATIONS IN SOUTH CENTRAL AND SOUTHWESTERN TEXAS:  
PRELIMINARY PAPERS ON THE BAKER CAVE  
AND ST. MARY'S HALL SITES

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*The Locations of the Baker Cave and St. Mary's Hall Sites.*

1, Baker Cave (41 VV 213), Val Verde County; 2, St. Mary's Hall  
(41 BX 229), Bexar County

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## BAKER CAVE, TEXAS: SOME RESULTS FROM THE 1976 EXCAVATIONS<sup>1</sup>

Thomas R. Hester

During July, 1976, a field team from The University of Texas at San Antonio conducted limited excavations at Baker Cave in Val Verde County, southwestern Texas. The site is located on Phillip's Canyon within the Devil's River drainage. The work was funded by the Center for Field Research (Belmont, Massachusetts), the Texas Archaeological Foundation, and the UTSA Center for Archaeological Research. The cooperation of ranch owner Mary Baker Hughey is deeply appreciated. I served as field director, and Professor Robert F. Heizer as co-director.

Two previous excavations had been conducted at the site. The first, directed by James H. Word, was done in the early 1960s, and a sizable portion of the central and northeast sectors of the stratified cave deposits was excavated. A report by Word and Douglas (1970) was issued as a *Bulletin* of the Texas Memorial Museum. In 1968, John W. Greer (at that time a graduate student at The University of Texas at Austin) excavated a triangular area, roughly 15 x 20 feet on its sides at the back wall in the center of the shelter. The results of Greer's extensive excavations have not yet been published; however, a lengthy manuscript, notes and numerous photographs are filed at the Texas Archeological Research Laboratory, Austin. Even though a considerable area of the cave had been excavated prior to our 1976 investigations, the previous findings in the 11 feet of dry, stratified deposits led us to believe that the vast archaeological potential of the site had been only slightly tapped.

Our investigations in 1976 had three major goals. First of all, we wanted to better assess the remaining deposits (i.e., to get an idea of just how much of the fill was left undisturbed), and as a part of this task, to experiment with a variety of excavation strategies, the most useful of which we hoped to use in a planned major project at the site in the future. A second goal, actually integrated with the first, was to test an excavation procedure designed, we hoped, to strip off and expose large areas of the stratified occupations in the deposits. Our accomplishments here were more limited due to the time lost because of weather--a factor I will comment upon shortly. We were, however, able to carefully expose and document a series of these occupational strata, to record localized activity areas within them, and finally, to learn just how maddening and difficult it is to follow these zones for any distance. In profile, the strata are textbook in appearance--sterile, occupation, sterile, occupation, and so on. Utilizing a horizontal excavation approach, they are found to be quite fugitive and require tedious excavation controls for successful exposure.

A third goal of the 1976 work at Baker Cave was to obtain additional data on the early occupations first excavated by Word, and later by Greer. Near the

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<sup>1</sup>Paper presented at the 1977 annual meeting of the Society for American Archaeology, New Orleans. Slightly revised.

bottom of the cave deposits, both Word and Greer had found a distinctive occupational stratum containing lithics, fauna and other cultural debris. Among the lithics was a Late Paleo-Indian projectile point form known as *Golondrina* (sometimes referred to as the *Golondrina* variant of *Plainview*). Word secured two radiocarbon dates from the stratum: 6960 and 7080 B.C. We hoped, in 1976, to obtain more information on the lithic assemblage, on subsistence (through intensive recovery of faunal and floral remains), and on the environmental context of the occupation.

Word had also noted additional fill below the *Golondrina* stratum, and it had not been definitely ascertained as to whether even earlier human occupational remains might be present (perhaps of the Folsom period as found at Bonfire Shelter not too many miles away). We chose to attempt this third goal because the excavations done by Greer in 1968 had left a "bench" in the rear of the cave--a partially excavated area in which all occupational materials had been removed down to the  $\pm$  2600 B.C. level.

Our field season at Baker Cave was shortened by an inordinately moist July in southwest Texas. The city of Del Rio, some 40 miles away, recorded 13.15 inches of rain during July, and Baker's Crossing on the Devil's River where we were camped, received more than that. A recent publication by the Texas Water Development Board states that this rainfall was "more than any other July in at least 71 years and nearly 13 times the normal amount for that month." To be sure, the cave stayed dry, but the archaeologists stayed wet and muddy in often unsuccessful efforts to reach the cave, and on three occasions were "isolated" by recurring floods on the Devil's River.

Two major areas of the site were excavated in the 1976 research: Operation 2 was in the "bench" area left by Greer and was oriented toward exposing the early deposits; Operation 3 began three meters to the north, and was the scene of efforts to expose occupational strata utilizing horizontal or "open area" techniques. Even with the rain-curtailed field session, a great abundance of data was obtained and is still under analysis.

My emphasis here will be on the archaeological record found in the Operation 2 area. The earlier research of Word, and then Greer, had fairly well secured the chronological sequence at the site. We knew from Greer's notes that his 1968 excavations near the rear of the cave had left a "bench," just beneath the floor of which we expected to find occupational remains dating from Pandale times (ca. 2600 B.C.). An intensive Pandale occupation was indeed found, with one of the most interesting cultural features being a pit filled with burned rock, plant parts and discarded fiber artifacts and lithics. Whether this is a "garbage pit" or a specialized cooking pit awaits later interpretation.<sup>2</sup>

Underlying the Pandale occupation, one finds a meter or more of loose, unconsolidated deposits, with rotted fiber (one well-preserved textile fragment was

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<sup>2</sup>From the Pandale and lower strata, we obtained a number of flakes, scrapers and points coated with residues of various kinds. These are awaiting detailed analysis in a collaborative effort with Dr. Harry J. Shafer of Texas A & M University.

recovered) and localized lenses. In terms of chronological context, we relate this unit to a very early Archaic tradition (what J. B. Sollberger and I have elsewhere called the "Pre-Archaic"; Hester and Sollberger 1972). In parts of the cave, it is characterized by the presence of corner-notched dart points known by a variety of type names but part of a point series of this time frame extending over southwest, central and southern Texas, and by triangular dart points ("Early Triangular" for lack of a better rubric) with a similar spatial and temporal distribution. In Operation 2, this loose, unconsolidated deposit yielded primarily projectile points of this "Early Triangular" form and several aberrant specimens which do not fit into any presently known type. Faunal and floral remains extracted from this deposit have been partially analyzed by Kenneth Lord (UT-Austin) and Phil Dering (Texas A & M University). A radiocarbon date from this deposit was processed through the generosity of Professor Heizer, Professor John A. Graham, and the Archaeological Research Facility, Berkeley, and is  $4690 \pm 140$  B.P. (ca. 2740 B.C.).<sup>3</sup> This date is about 2000 years later than we expected, and we will have to await further stratigraphic and dating efforts to ascertain whether it is indeed accurate.

Immediately below the unconsolidated fill is a distinctive gray stratum, termed Zone I by Word. It is this zone that is attributable to a Late Paleo-Indian occupation of the Golondrina Tradition. Because of the lack of time and danger of wall-slumping, we were able to expose an area of only about 6 m<sup>2</sup>. However, within this area, considerable cultural remains were recovered. Lithics included a *Golondrina* basal fragment, a probable preform made on a blade, and a bifacial gouge-like implement. The latter is of particular significance, as such tools (known as "bifacial Clear Fork" tools) had been found in surface or otherwise inconclusive association with *Golondrina* points in northeastern Mexico (cf. the San Isidro site excavated by J. F. Epstein in Nuevo Leon; Epstein 1969) and southern Texas; this represents the first excavated association, demonstrating that the tool form is definitely an element in the Golondrina Tradition tool kit. Additionally, the implement is covered with residues; it had apparently been resharpened only a short time before it snapped from its haft.

Of greatest importance was the discovery of a large basin-shaped hearth or cooking pit, covered with a dome-like pile of burned rock, and filled with ash and charcoal. The maximum diameter of this feature was 1.20 m and it was 30 cm deep. After this pit had been recorded and photographed, we decided to bag up every bit of the fill and haul it out of the cave for controlled fine-screening in the laboratory. While some of our crew members thought we were especially crazy at the time for having them haul something on the order of 200+ pounds of hearth fill up the cliff face, we discovered during laboratory processing that the fill was packed with fish, mammal and reptile bones, seed remains, chert flakes and other debris.

A considerable portion of the hearth matrix has now been processed by specialists. A preliminary pollen scan by Ed Luther of the Department of Paleontology at the University of California at Berkeley led to the identification of

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<sup>3</sup>Radiocarbon corrections or "calibrations" published in the *MASCA Newsletter*, Vol. 9, No. 1, 1973 (p. 20) indicate that this date is actually between 3350-3370 B.C.



sunflower, grasses, oak, Mormon tea, buckthorn, cattail and a variety of herbaceous plants. A more detailed palynological study has not been done up to this time.

Paleobotanical research has been conducted by Phil Dering of the Anthropology Research Laboratories at Texas A & M University. The hearth matrix was passed through 1 mm and 6 mm screens and a specialized flotation method was utilized. Materials derived from these procedures were hand-sorted, identified and quantified by Dering and his assistants. From the matrix came wood charcoal, flowers, fruits and seeds of 16 plant species. Selected wood charcoal specimens were identified by Liz Porter of Texas A & M, using a 40X dissecting scope. Identified woods included oak, juniper, buckeye, hackberry, guajillo, sycamore, mesquite and creosote bush. The most abundant seeds and fruits identified by Dering were (in order of abundance) littleleaf walnut, prickly pear, persimmon, two species of hackberry, mesquite, oak, mescal bean, Mexican buckeye and several lesser species including grape and littleleaf sumac. A full description of Dering's research will appear in the final report on the 1976 excavations.

Fauna extracted via fine-screening from the hearth matrix have been partially identified by Kenneth J. Lord of The University of Texas at Austin (manuscript to appear in the final report). The faunal list includes 11 species of mammals, several reptiles and six species of fish. Cottontail rabbit, ground squirrels, rats, mice and gophers dominate; gray fox and jackrabbit are also present, although only a single bone of the latter was noted. Striking is the absence of larger fauna, such as deer, from the hearth matrix. Word did find elsewhere in Zone I the bones of deer and coyote. Among the fish, the sucker family is predominant, with the red-horse sucker and the carp best represented. Of particular interest is the presence of spotted bass, a species found today, according to Lord, in the Brazos and Trinity Rivers system.<sup>4</sup> Reptiles include at least two lizard species, one being of the genus *Anolis* found today in central and coastal Texas--and absent in southwest Texas. There are also abundant snake bones, primarily of non-poisonous snakes (a possible rattlesnake was also identified), and the bones of a frog or toad. Two bird bones were also noted, but Mr. Lord is presently unable to identify these.

There is no doubt that this hearth and its contents date from Late Paleo-Indian times. It is stratigraphically sealed in the Golondrina stratum, and a radiocarbon assay of 7070 B.C.  $\pm$  150 B.P. (TX-2466) years has been provided by the Radiocarbon Laboratory at The University of Texas at Austin. Another date has been processed with the aid of the Archaeological Research Facility, Berkeley, and is 9180  $\pm$  220 B.P. (ca. 7230 B.C.). Charles Tucek (Radiocarbon, Ltd.; personal communication) suggests that correction for these dates (based on recent C<sup>14</sup> calibration studies) would place them at ca. 8000 B.C.

Many questions are, however, posed by the hearth. What can it tell us about subsistence preferences during this period? What does it represent in terms of food-processing technology? Can the palynological, faunal and floral data

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<sup>4</sup>However, Glen L. Evans (personal communication, 1977) reports catching spotted bass while fishing in Montell Creek in the late 1940s. Montell Creek is about 70 miles from Baker Cave.

provide some insights into the paleoenvironment of this period? These and other interesting questions can be only partially answered at present. Dering and Lord feel that, based on the present evidence, a more mesic climatic system predominated. Plants characteristic of xeric conditions, such as sotol and lecheguilla, are absent from the hearth, and were not noted by Dering in botanical samples from the Golondrina stratum. The faunal and floral data indicate a subsistence pattern oriented toward riverine and canyon resources. Fish and rodent populations are dominant in the hearth matrix, although the individual fish are small in size. Canyon and streamside plant foods, such as walnuts, acorns and Mexican buckeye were quite prevalent. However, among both the fauna and flora, a wide spectrum of other resources is evident, suggesting broad utilization of available foodstuffs. No late Pleistocene fauna are represented.

We are not yet sure, and we may never be sure, as to just how this large ash and charcoal-filled pit--which I have been calling a hearth--was used. Obviously it was used for repeated cooking tasks; the bottom of the basin was baked a pink-red color, and various lenses of ash and charcoal were noted within the pit. At the top of the pit, just under the cap of burned rock, were concentrations of charcoal, with some pieces more than 10 cm in maximum dimension. It looked as if the fire in the pit had been quickly smothered. It seems as if the pit functioned for cooking a variety of fauna, and perhaps in a variety of methods. For example, South Texas wildlife experts state that the drum fish (common in the hearth) is best prepared either by barbecuing or by smoking. Rabbits, rats, lizards and other small creatures might have been roasted or scorched over fires built in the pit. And we should not overlook the distinct possibility that the pit also served as a convenient trash disposal. There are abundant flint chips, primarily pressure flakes and biface thinning flakes, in it. And, in an ethnographic analogy drawn from northeastern California, we note that some aboriginal peoples in that area often tossed fishbones into their hearths as they did not want their children stepping on them (Voegelin 1942:178)!

Much more matrix from the hearth awaits processing. The continuing special studies mentioned here will undoubtedly contribute more to our knowledge of this 9000-year-old feature.

Dering has also examined certain of the plant macrofossils from overlying deposits in the "Pre-Archaic" and Pandale period strata; there are some distinct differences in comparison to the Golondrina horizon. For example, there may have been a heavier utilization of walnut, and one sees for the first time the exploitation of pecan. Gourds, yucca and a minuscule amount of lecheguilla are added to the floral list from the "Pre-Archaic" zone; sotol appears in the Pandale strata.

The data from the Golondrina stratum at Baker Cave have broad-ranging implications for a cultural tradition that is widespread across southwest and southern Texas, the central Texas area and central Texas coast, and into northeastern Mexico. I will be summarizing these in a forthcoming paper. In terms of Baker Cave and the immediate Devil's River vicinity, the data noted here suggest a Late Paleo-Indian population, of ca. 9000 years ago, utilizing a broad spectrum of resources--but with heaviest emphasis on riverine and canyon resources. We do not yet see the sotol/lecheguilla upland plant exploitation

pattern of the lower Pecos Archaic; this is a manifestation which apparently does not emerge until roughly Pandale times at ca. 2600 B.C. These data also serve to support the hypothesized mesic climatic regime in the region around this time period as suggested by the paleoenvironmental research of Story and Bryant (1966).

I would like to also note that we did explore the deposits beneath the Golondrina stratum. We found about 60 cm of roof spalls and limestone dust, full of rat and mice bones, but with no conclusive evidence (at least in this part of the cave) of human habitation. In a niche in the cave floor was an accumulation of wood, which we thought might be a Pleistocene wood rat midden; however, Thomas Van Devender's review of color slides of the feature leads him to believe that it is not such a midden.<sup>5</sup>

The stratified deposits of Baker Cave span the past 9000 years. Much of the cave remains undisturbed, and its difficult access and protective landowner may prevent its destruction by looters until the time (in the not too distant future, we hope) that its highly informative prehistoric record can be more fully exploited.

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<sup>5</sup>An abundance of faunal materials was recovered from this basal stratum. Most of the bones appear to be those of rodents and herpetologic species; the latter are being studied by Dr. Thomas Van Devender, University of Arizona.

## EXCAVATIONS AT ST. MARY'S HALL (41 BX 229): A BURIED

PLAINVIEW CAMPSITE IN SOUTH CENTRAL TEXAS<sup>1</sup>

Thomas R. Hester

During June and July 1977, The University of Texas at San Antonio Archaeological Field Course conducted excavations at the St. Mary's Hall site (41 BX 229), within the city limits of San Antonio, Bexar County, Texas. The site was officially recorded in 1973. However, prior to that time, during 1972, a house was built on the southern portion of the site, an area lying outside the boundaries of the St. Mary's Hall property (a private girls' school). During the clearing and construction phase, extensive pothunting destroyed the southern portion of the site. Fortunately, the collection (including numerous *Golondrina*, *Angostura* and *Plainview* points) was kept intact and has since been analyzed (Cantu *et al.*, ms). Because of the total destruction of the southern section of the site, the then newly-formed Southern Texas Archaeological Association (STAA) decided to undertake test excavations to learn something about the St. Mary's Hall sector.

During 1974-1975, the STAA conducted extensive research at the site. The surviving portion was found to be about 45 meters long (north-south) and 35-40 meters east-west. Multicomponent occupational debris was found, both horizontally and vertically stratified within the site area. At the northern end of the site, the STAA excavations revealed an extensive midden deposit, containing some burned rock accumulations; this midden was 20 meters long and 12-15 meters wide, and the cultural remains spanned the Middle and Late Archaic through the Late Prehistoric periods. Beneath the midden, however, the STAA teams encountered a caliche gravel deposit, and within this, found evidence of a Paleo-Indian, possibly *Plainview*, occupation. Excavations were then ceased, in order to permit extensive, more long-term investigations to be conducted so that the early materials could be thoroughly documented. At about the same time, in an area 15 meters to the southwest of the midden, an STAA test unit revealed what appeared to be yet another early occupation, dating from *Folsom* times (see a summary of the data obtained by STAA in Hester 1975).

In summer 1977, excavations were resumed at St. Mary's Hall for a 6-week period. These investigations were designed to expose large areas in both localities (Area A: *Plainview*, Area B: *Folsom*) where early materials had been found. The primary strategies included a thorough stratigraphic re-evaluation of the entire deposits, *in situ* plotting of all materials, maximum recovery of faunal and other non-artifactual remains, and the use of precise vertical and horizontal controls designed to better sort out the occupational sequence. An overriding concern was to delineate the early occupations both vertically and horizontally and to record the spatial patterning of materials within these occupation areas.

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<sup>1</sup>Paper presented at the 1977 annual meeting of the Texas Archeological Society, Arlington. Slightly revised.

In this preliminary paper, some of the initial results of our work are reported. At this time the materials are still under analysis, and it will be some months before definitive statements can be made in reference to certain of our specific goals. First, I want to review very briefly the geology, the stratigraphic record and the occupational sequence at the site.

The site is located on a colluvial downslope overlooking the Salado Creek valley. The Salado is a major tributary of the San Antonio River, joining the river south of the city. The site is situated atop one of the highest points in the Salado valley, at an elevation of approximately 760 feet above sea level, about 35 meters west of the present stream channel.

In a typical excavation unit profile for Area A (*Plainview* area) we have this stratigraphic picture: the upper unit is a brownish-gray midden with scattered burned rock, hearths and one extensive accumulation of massive burned rock. This stratum extends to a depth of 40-50 cm, and contains Late Prehistoric materials in the upper part, with Late Archaic (and occasional indications of Middle Archaic) materials in the lower portion. At 60-75 cm, a stratigraphic unit composed of brownish soil and caliche gravels is found, and within this stratum one finds Pre-Archaic phase artifacts. Below this is a stratum that we referred to as the "gravels"--composed of caliche nodules or gravels with interstices of weathered limestone clasts. Geomorphologists (Dr. Charles M. Woodruff and Glen L. Evans) describe the unit as having been formed by colluvial slopewash. On top of the gravel unit, Late Paleo-Indian specimens such as *Golondrina* and *Angostura* were found, with *Golondrina* at a lower stratigraphic position.

Part of the gravel unit has been badly disturbed by the formation of caliche "balls" or conglomerates. The mechanisms which caused the formation of these most disruptive features are poorly known; Woodruff offered two possible explanations: (1) that they are a local soil phenomenon caused by underground water flow or percolation; or (2) that a local ephemeral stream once coursed through a portion of the site leaving limey deposits. The possibility of an erosional or stream-like area is supported by our excavations; at any rate, we isolated the areas of caliche "balls" and then left them alone! They have played havoc with artifact patterning and with the stratigraphy through swelling and shrinking. Fortunately, a large part of Area A had been spared the presence of caliche "balls," and this was where we concentrated our excavation efforts.

In the gravel unit--away from the caliche balls--an occupation tentatively identified as of the *Plainview* period was found about 15-20 cm into the stratum. Cultural materials were extensive and were precisely documented. I will focus on this occupation below.

Before dealing with the *Plainview* materials, however, I should briefly mention Area B, about 15 m to the southwest, where the STAA teams had found a *Folsom* point in a test pit that had penetrated into the gravels. Several excavation units were opened in this area, revealing a very complex stratigraphic situation, and unfortunately, no further distinctive evidence of a *Folsom* occupation. Instead, much of the area had been disturbed by caliche "balls," and by gully erosion. Woodruff was of the opinion that stream cutting and high terrace deposition were represented in this portion of the site.

In the remaining portion of this paper, I want to make some observations about what we are tentatively terming a *Plainview* occupation and workshop at St. Mary's Hall. The analysis is still underway, and the quantities of materials will require many more months of work before final observations can be made.

The occupation is considered *in situ* by our geological consultants and is sealed within the gravel unit. Except on the northern margins, where the caliche conglomerates occur, it is undisturbed (except, of course, for an occasional rodent burrow). The best measurements available at this time indicate that the area utilized by the *Plainview* period peoples is 8 meters long, north to south, and about 6 meters wide (48 m<sup>2</sup> or about 157 square feet). Diagnostic projectile points were clustered near the central part of this area (usually occurring under the balks of excavation units!). Several hundred pieces of debitage were scattered throughout the area, but spatial analysis has not yet been completed.

Other lithic forms include trimmed or edge-modified flakes, steep bitted unifaces usually taking the form of end scrapers, a large bifacial *Clear Fork* tool, a heavily worn chopper, thinned bifaces perhaps used as knives, numerous preforms (representing, on preliminary study, all stages in the tool/point production process; and here I think we will have some excellent data on production modes, breakage patterns and the like) and a number of cores. Cores, heavy debitage, and preforms appeared upon first analysis to be clustered at the west to west-central part of the living area, but more refined analysis still has to be done. The set of points (one heavily fire fractured), trimmed flakes, formal unifacial and bifacial tools, some scattered animal bones (deer-sized and bison) and burned hearthstones are indicative of campsite activities. The numerous preforms and cores, and the substantial amount of debitage, suggest lithic workshop activities associated with the campsite. That is, there was considerable emphasis on chert-working, over and above that necessary for maintenance purposes.

The Salado Creek valley below the site has abundant chert resources in the form of stream cobbles, and there are workshops of later periods along the terraces and upland slopes. Unfortunately, little charcoal was recovered from the occupation, although great numbers of hackberry seeds were preserved. These occurred in a rather even horizontal and vertical distribution correlating with occupational debris, suggesting that they are not the result of rodent burrowing or other natural means of introduction. No pollen was present (Phil Dering, personal communication), but plant phytoliths, from the epidermal parts of plants, have been recovered (Ralph Robinson, personal communication).

The caliche gravels in which the materials are buried do not, apparently, indicate any particular climatic and environmental situation, as some archaeologists have suggested for parts of the Southwest and northern Mexico (cf. Hayden 1976). Both Woodruff and Evans believe the "calichefication" is a normal soil process in the site area; Evans believes that the occupation was probably originally buried in clay-loam soils of the type that constitute the uppermost soil horizon in the valley today. Large numbers of *Rabdotus* snails came from the occupation area; the specimens are somewhat larger than the norm for this snail family today, based on initial studies by field school students,

B. Guntharp and T. Anderson. It is interesting that in plotting the vertical distribution of snails through the occupational sequence at the site, one notes the highest frequencies in the lowest (*Plainview*) and the uppermost (Late Prehistoric) levels. Additionally, in the Late Prehistoric levels, there are concentrations of snails, one in a pocket of ash and charcoal.

In closing, a brief comparative note is essential in relating the diagnostic artifacts of this occupation to other early assemblages in the region. The projectile points are definitely not of the *Golondrina* form, which dates to ca. 7000 B.C. based on several radiocarbon assays from Baker Cave; indeed, the limited sequential data on St. Mary's Hall reinforces the temporal occurrence of *Golondrina* at a later time. We have not yet attempted dating of bone or hackberry seeds from the St. Mary's Hall early occupation. However, the projectile points are much like those found by Dibble (see Dibble and Lorrain 1967) at Bonfire Shelter (particularly one which is identical to that shown in Dibble's Fig. 14, although 1.5-2.0 mm thicker). Three dates from Bonfire possibly applicable to the *Plainview* series are around 8000 to 8200 B.C.

In comparing these materials to the specimens found at the *Plainview* bison kill site, one notes that the specimens from the so-called "type" site (Krieger 1947) are somewhat larger than the specimens from either St. Mary's Hall or Bonfire. Evans and T. N. Campbell (personal communication) feel that the *Plainview* type site probably represents a series of bison kill episodes and that the apparent "type" specimens from the site may indeed be a mixture of forms over a considerable period of time. Despite some recent studies (largely unpublished), the *Plainview* "type" remains poorly known and ill-defined. Perhaps extensive comparative studies using the St. Mary's Hall assemblage will help to improve this situation.

Most significant about the St. Mary's Hall occupation is that its analysis will provide us with a view of open campsite and lithic workshop activities of this early period, adding greatly to the limited lifeway data that we presently have. These data will supplement information on other aspects of this early cultural system derived from kill sites, butchering localities (such as the one found at Lubbock Lake by Eileen Johnson and Vance T. Holliday), and rockshelters.

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