EVIDENCES OF EARLY MAN FROM THE VICINITY OF SAN ANTONIO, TEXAS

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INTRODUCTION

In south central and southern Texas, as well as in the adjoining part of northeastern Mexico, a small number of early types of flint projectile points have been reported from archeological sites that also contain artifacts attributable to various Archaic[1] and even later cultures. Most of these are surface associations, but some are buried associations that have been revealed by excavation. Among the types of Paleo-Indian points reported are Clovis, Folsom, Scottsbluff, Plainview, Meserve, and Angostura. Elsewhere, but particularly in the Great Plains of the United States, these weapon points have been found under circumstances which indicate that they were made and used in Late Pleistocene and early post-Pleistocene times by the earliest known inhabitants of North America (see Sellards, 1952, for a recent summary).

In 1935 Sayles (1935: 90-91 and Plate XXV) first called attention to this situation by illustrating several "Folsom and Yuma types" of projectile points which he found in surface association with artifacts attributed to certain Archaic cultures of south central and southern Texas, particularly his Round Rock and Oso phases and his Coahuiltecan Branch (*ibid.*, Plate XXV, *e*, *f*, and *i*; the specimen at *e* is also illustrated by Gladwin, 1937: Plate VII, third from left). One of Sayles' points (*f*) has been identified by Davis (in Bell and Hall, 1953: 6-7) as a Meserve point, a type that has been found associated with Plainview points in the Red Smoke site of southern Nebraska. The Meserve point is regarded by Davis as a "specialized functional variant of the Plainview point" (Davis, 1953: 384) and on geological grounds has been assigned to the Late Pleistocene (*ibid.*, 385).

In 1940 Sellards reported the results of extensive excavation at Site No. 1 on Blanco Creek, Bee County, Texas, where a few projectile points and other flint artifacts were found in association with bones of extinct animals (elephant, horse, large bison, camel, and others) in the lower part of the Berclair terrace. Because of the fauna included, this deposit was judged to be of Pleistocene age. Although most of the points were fragmentary, they include points which today may be recognized as Clovis (Sellards, 1940: Plate 1, No. 8), Folsom (No. 7; too thin for removal of channel flakes), Scottsbluff (No. 5), and Angostura (No. 4). The same deposit also included side-notched dart points and Clear Fork scrapers or gouges that are referable to the Edwards Plateau Aspect (Archaic) of later times

[1]The term "Archaic" is used to refer to the cultures of hunting and food-gathering peoples of late post-Pleistocene times, but before the introduction of such cultural traits as the bow and arrow, pottery, and agriculture. In central and southern Texas the various Archaic cultures are believed to have lost their identities sometime between A. D. 500 and 100, or possibly even later. Inception dates are still a matter for speculation, as radiocarbon samples from excavated sites have yet to be dated.

and have not been found elsewhere in association with extinct animals. Even after the elapse of fifteen years, with notable advances in archeological knowledge, this unique assemblage of flint artifacts and faunal forms is still difficult to evaluate. Clovis points (associated with elephant) have been found below Folsom points (associated with large bison) at the Blackwater No. 1. locality in eastern New Mexico (Sellards, 1952: 29-31, 54-58, 72-74), and neither type appears to occur in the same deposit with Scottsbluff or Angostura points anywhere else. The apparent contemporaneity of these four types in Bee County is not easily explained.

Evans (1950), in reviewing the Late Quaternary faunal succession of the southern High Plains, has cited the Bee County evidence as indicating a survival of all types of the typical Pleistocene animals on the Gulf coastal plain. More recently Evans (letter, Oct. 15, 1954) has suggested that if the large mammals were contemporaneous on the Texas coastal plain, then archeologists might consider the possible contemporaneity of several groups of early hunting peoples in the same region. In other words, the makers of the distinctive Clovis, Folsom, Scottsbluff, and Angostura points might have ranged over this region during the same span of time. We suspect that most archeologists will quickly challenge this idea.

One important problem still remains—namely, the relationship between the early hunting peoples and the Edwards Plateau peoples. The Bee County evidence indicates that they overlap in time. Either the Edwards Plateau culture is older than commonly believed or the early hunting groups (*and* the extinct fauna) survived much later than is presently suspected. The latter view seems to have been favored by the late Kirk Bryan (1941), who stated that the lower Berclair terrace deposit of Bee County might be either late Pleistocene or more likely post-Glacial in date ("post-Glacial optimum of about 5,000 years ago"). If Edwards Plateau artifacts had not been found in this deposit, it is doubtful if a possible post-Glacial date would even have been mentioned.

In 1947 Krieger (1947: 21-28; see also Krieger, 1948: 120) described three "unnamed types" of lanceolate points from Texas, especially central Texas. One of these types (*ibid.*, 1947, Plate 1, a) has been found *in situ* in the Angostura area of southwestern South Dakota and is now known as the Angostura point (originally called Long point by Hughes, 1949: 270). Radiocarbon dating places this type at about 5500 B. C. in South Dakota (Johnson, 1951: 13, 18). A second type (Krieger, 1947: Plate 1, c) appears to embrace one of the points illustrated by Sayles (1935: Plate XXV, *e*, referred to above). Krieger referred to the sporadic occurrence of these three types of points in burned rock midden sites (Archaic for the most part) of central Texas, but individual specimens from specific sites were not described or illustrated.

Sellards (1952: 93) has recently illustrated five Folsom points found in the debris of unknown excavators at the Kincaid Shelter, Uvalde County, Texas. Controlled excavations failed to determine the stratigraphic placement of Folsom points in the shelter deposits. A date of about 8000 B. C. has been obtained for Folsom points at a site near Lubbock, Texas (Johnson, 1951: 16).

More recently, R. de la Borbolla and Aveleyra (1953) have reported the occurrence of a Plainview point from the Falcon Reservoir area of northern Tamaulipas, Mexico. This point was found in surface association

with abundant artifacts, presumably from the Falcon Focus (Archaic) described in preliminary reports by Krieger and Hughes (1950) and Cason (1952). R. de la Borbolla and Aveleyra also refer to unpublished data supplied by Alex D. Krieger which indicate the occurrence of other forms of early projectile points in southern Texas: a fragment "possibly of a Scottsbluff point," found on the Texas side of the Falcon Reservoir area; and Plainview points, or points similar to Plainview, found in Frio, La Salle, McMullen, Uvalde, and Victoria counties, Texas. Only one point, the Plainview specimen from Tamaulipas, is illustrated.

This survey of the pertinent literature shows that in southern Texas and northeastern Mexico no single type of Paleo-Indian projectile point has been found in stratigraphic isolation. Instead, several types have been found in the same deposit (Bee County) along with Archaic artifacts. Most of the points in this area are surface finds from Archaic sites. The survey also shows that very few Paleo-Indian points (actually only 13) have been described and illustrated. This is a serious deficiency, for descriptive data are essential for making typological comparisons, for plotting the continental distribution of each type, and for recognizing local and regional variations within each type. As a partial remedy for this deficiency, we are presenting data on 31 projectile points selected from two private collections made near San Antonio, Texas. Numerous other private collections are known to exist in the area under consideration, and we would appreciate hearing from collectors who have projectile points similar to those illustrated in this publication (mailing address: Box 8012, University Station, Austin 12, Texas).

PROJECTILE POINTS FROM THE OLMOS DAM SITE, BEXAR COUNTY, TEXAS

Olmos Creek, a small, intermittent South Texas stream, rises just below the Balcones Escarpment of the Edwards Plateau in north central Bexar County. It flows in a southwesterly direction for 12 miles to join the San Antonio River near its head at Incarnate Word College in the northern part of San Antonio. In its lower part the valley of Olmos Creek varies in width from 1,500 feet to about one mile.

Olmos Dam, a rock and concrete structure with a northeast-southwest axis, a length of 1,941 feet, and a 24-foot roadway along its top, is located about one-half mile above the mouth of Olmos Creek. Built after a disastrous flash flood which came in September, 1921, it is a retention dam for flood control purposes only. It was designed to prevent floodwaters of the Olmos drainage from emptying too rapidly into the San Antonio River, which flows through the business district of San Antonio. Today water accumulates behind the dam only after exceptionally heavy local precipitation.

For at least thirty-five years the Olmos Dam area has been known to collectors in San Antonio as a good place for finding Indian artifacts, particularly from the Edwards Plateau and Central Texas aspects. Two such collectors, C. D. Orchard and J. L. McLellan, kept records on all of their archeological specimens. Site locations were recorded on topographic and geological maps, as well as on small-area sketch maps in some instances. Specimens were numbered with India ink and a record of each specimen was entered in a card catalogue. At times McLellan kept a journal covering his collecting trips, and all of his specimens and records are now in the possession of Orchard.

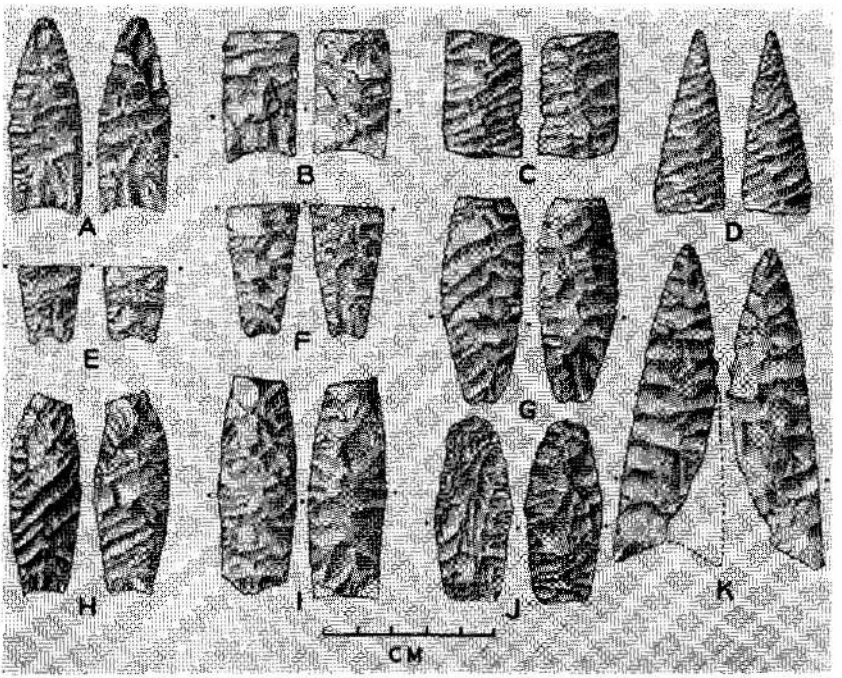

FIG. 1. Projectile points from the Olmos Dam site, San Antonio, Bexar County, Texas. From spoil of initial dam foundation excavations, E-G; from surface, A-D, H-K. Dots indicate extent of lateral smoothing.

As a result of cultivation and sheet erosion, the principal terrace surface (the first terrace above the present floodplain) in the vicinity of the dam has been lowered from twelve to eighteen inches since 1920. The original upper humus layer is now gone, and the present cultivated surface is a light brown silty clay. Stone hearths have frequently been exposed during this lowering of the valley fill. The area southeast of the dam is still in cultivation, but the area to the northwest has been leveled, sodded, and made into a golf driving range.

This same situation appears to be duplicated in an area approximately 1,000 feet upstream from Olmos Dam. Here, in June, 1953, a large quantity of alluvium was removed by the City of San Antonio for use in the various city parks. At depths ranging from two to four feet the bulldozers encountered a number of hearths. As the alluvium was removed down to this hearth zone, concentrations of burned limestone fragments were exposed over an extensive area. Orchard counted 122 such concentrations. The artifacts thus far collected here are assignable to the Edwards Plateau Aspect.

The projectile points described below were collected in the autumn and winter of 1921-1922 by C. D. Orchard and J. H. McLellan. All of them came from a restricted area approximately 700 feet from the southwestern end of Olmos Dam. This area was crescentic in outline, having a

length of some 300 feet and a maximum width of approximately 50 feet, and its axis ran roughly northeast-southwest. It lay in a low, swale-like area. The dam, when built, crossed this crescent-shaped area obliquely. The greater part of the area, approximately 200 feet of its length) now lies under the dam and the fill of the golf driving range nearby.

Of the specimens illustrated in Fig. 1, A-D, H-K were collected from the surface of the area described above. The remaining three specimens, E, F, and G, were found on the spoil heaps of excavations made at the base of the present dam. These three specimens are of special interest because of their similarity in form (Angostura type) and because there is some suggestion of their original stratigraphic position.

In the autumn of 1921 test borings were made at intervals across the valley of Olmos Creek to determine the position of bedrock. At the site of each test a pit four feet square was dug to a depth of three to four feet. An auger was then used for the remainder of the distance downward to bedrock. From the Engineering Department of the City of San Antonio we recently obtained a copy of a blue-print entitled "Profile and Boring Record, Olmos Creek Detention Dam (Sheet 3)," and by checking against the Orchard and McLellan records we have identified three test holes in the area from which specimens E, F, and G were collected. All three test borings reveal essentially the same stratigraphy. Test Hole 35, for instance, records the following:

Soil	0" - 2'6"
Clay	2'6" - 19'6"
Gravel	19'6" - 22'1"
Hard Limestone	22'1" - 24'7"
Botom of test	24'7"

Unfortunately the Orchard records do not make it clear as to whether he collected the three specimens just after the test borings or just after the bulldozing operations which started excavation for the dam foundation. If collected after the test borings, the specimens probably came from the upper three to four feet of valley fill, which means that they could have to that depth; if collected after the initial foundation excavation, the specimens came from the upper 18 inches of fill, for the Orchard records also indicate that he visited the dam site at a time when rainfall had halted bulldozing operations at a level approximately 18 inches below the surface. It is thus possible to say that the three points probably came from the upper three to four feet of valley fill, which means that they could have come from the stratum labeled "Soil" on the blue-print, or from the upper part of the stratum designated at "Clay." As it is not now feasible to conduct excavations in this area, the record must remain in this inconclusive state.

Just west of the artifact-yielding area being described and at an elevation one to two feet higher, a bone bed was observed by Orchard and McLellan. This was exposed on the surface and was decomposing rather rapidly. Small test pits made by Orchard and McLellan showed that this bed of bones was lens-shaped, varying in thickness from a few inches to 2½ feet, and that it rested on dark soil. This bed has since been destroyed, and there is no way of finding out if it was in any way related to the artifacts here described. The following faunal forms were noted: bison (including a poorly preserved skull), mastodon (highly mineralized frag-

ment of a tooth cusp, now in Orchard's collection), horse, deer, peccary, rodents, birds, turtle (carapace fragments), and fish (vertebrae). In the collection of bones saved by Orchard, which does not include the horse, the only extinct animal represented is the mastodon, to which no special significance can be attached.

In addition to the projectile points shown in Fig. 1, a few artifacts assignable to the Edwards Plateau Aspect were found in the crescent-shaped area. The primary question is whether the projectile points shown in Fig. 1 are associated with the Edwards Plateau materials or represent one or more cultural units from an earlier time period. This question cannot be answered on the basis of the data available, but the restricted distribution of the projectile points suggests the latter.

TABLE I

PROJECTILE POINTS FROM OLMOS DAM SITE

Fig. 1	Measurements in mm. Length	Maximum Width	Maximum Thickness	Basal Width	Depth of basal Concavity
A	56	21	6	19	3
B	—	21	7	19	3
C	—	22	7	—	—
D	—	20	5	—	—
E	—	—	5	12	2
F	—	20	6	9	1
G	—	23	7	9	1
H	—	21	7	13	1.5
I	—	22	8	—	—
J	—	14	8	15	—
K	94	—	7	—	—

TABLE II

PROJECTILE POINTS FROM BLANCO COUNTY

Fig. 2	Measurements in mm. Length	Maximum Width	Maximum Thickness	Basal Width	Depth of basal Concavity
A	—	25	6	19	3
B	—	25	8	20	3
C	(48)	26	8	24	1
D	—	31	7	(28)	3
E	—	—	7	(24)	(6)
F	—	—	6	20	7
G	—	—	8	18	2
H	64	26	8	11	2
I	—	—	9	14	1
J	—	—	7	12	1
K	62	21	7	8	—
L	—	—	7	11	—
M	—	—	8	10	—
N	—	20	7	—	—
O	—	23	8	—	—
P	53	19	8	13	—
Q	—	—	7	14	1
R	—	—	10	17	1
S	—	18	8	(15)	2
T	49	21	7	11	1

From the surface of the crescent-shaped area at the Olmos Dam site came two points which appear to fall within the range of the Plainview type as defined by Krieger (Sellards *et al*, 1947: see Plate 3, No. 6 and 7; Plate 4, No. 3). The first of these (Fig. 1, A) is made of gray flint and is almost complete. The base is concave; the lateral edges are approximately parallel for about one-third the length of the point, then expand slightly, so that the greatest width is near the midpoint. The chipping is not notably regular, but a few flake scars extend obliquely across each face. The base has been thinned by removal of a few relatively long flakes on each face, and the base and lateral edges have been smoothed. (Measurements of all points described are given in Tables I and II).

The second Plainview-like point (Fig. 1, B), which is made of tan flint, is represented by a proximal fragment. It has a concave base, and the lateral edges are roughly parallel; however, one lateral edge is straight, the other gently convex. The greatest width is near what appears to have been the midpoint. The chipping is irregular, and the base has been thinned by the removal of several rather long flakes on one face. The base and lateral edges have been lightly ground.

Three (and possibly four) Angostura points occur in this Olmos Dam series, but none of these is complete. They are very similar to the concave-based Angostura points illustrated by Hughes (1949: Fig. 68, m, n, and q). These three points (Fig. 1, E-G) came from the spoil of initial dam foundation excavation.

The proximal fragment shown in Fig. 1 at F is made of brownish-gray flint. The base is slightly concave, and the lateral edges, which are almost straight, diverge from the base to the place where the break occurred. The chipping is irregular, and the base has been thinned, one face bearing a rather long, narrow, channel-like flake scar. The base and total length of both lateral edges have been smoothly ground.

The second proximal fragment (Fig. 1, E), made of chalcedony or very translucent flint, is similar, but it has a broader and more deeply concave base. The base and all of both lateral edges have been smoothly ground.

The point shown at G, made of brownish-gray flint, differs from E and F only in minor details. It has less basal concavity, a more regular flake-scar pattern, light grinding on the base and adjacent lateral edges, beyond which the lateral edges are unevenly serrated. On one face there is a noticeable beveling of the distal portion (see right view).

The point at H, which is made of pinkish-tan flint and nearly complete, is similar to the points described above. It differs, however, in the pattern of its flake scars, which tend to be obliquely parallel, and in the absence of grinding on the base and lateral edges. The absence of smoothing gives the point a doubtful status as an Angostura point.

The remainder of the points in the Olmos Dam series cannot be identified as to type. The fragment in Fig. 1 at I, which is made of brownish-gray flint, may have had a concave base, as suggested by the dashed-line reconstruction, with indications of a slight flare at the base. The greatest width is near the midpoint, and the lateral edges have been heavily ground up to the level of maximum width. The chipping is irregular.

The fragmentary point at Fig. 1, K, made of brownish-gray flint, is unusual in the series because of its trianguloid outline, its deeply concave

base, and its broad and rather regular collateral flake scars. The collateral flaking did not produce a clearly defined median ridge, but in cross section this specimen is a very flattened lozenge. The base has not been ground, but the lateral edges have been ground up to points indicated by dots in Fig. 1.

The point at Fig. 1, J, made of light brown flint, has a very slightly concave base and a stem with lateral edges that gently diverge as they approach a poorly defined shoulder. The chipping is very irregular, but the stem edges have been lightly ground. It resembles certain points from the Blanco County series described below (see Fig. 2, R).

The fragment at Fig. 1, C, made of pinkish-buff flint, has flake scars that are obliquely parallel, but notably more so on one face than the other. The distal fragment at D, of brownish-gray flint, is of interest only because of its obliquely parallel flake-scar pattern. One lateral edge is serrated. No trace of grinding can be detected on the lateral edges at its proximal end.

PROJECTILE POINTS FROM BLANCO COUNTY, TEXAS

The late A. E. Anderson of Brownsville, Texas, made surface collections from archeological sites in Blanco County during the years 1902-1904. His collection from Blanco County, which has been loaned to the University of Texas, contains 20 projectile points that are of special interest (Fig. 2).

According to Anderson's catalogue, two of these points were found in "burnt rock" midden sites. Other artifacts from the two sites in Anderson's collection are clearly assignable to the Edwards Plateau Aspect. The point shown in Fig. 2, H was found in a "burnt rock site perceptibly mounded on Little Blanco River just above Blanco-San Antonio road crossing and on north side of river in pecan grove" (Anderson Catalogue, University of Texas). The point illustrated at P was found in a "burnt rock site in a field back under toe of hills, a short distance south of [Blanco] river about 6-8 miles above town of Blanco, and about a mile above the W. A. Ross farm on opposite side of river" (*ibid.*). The remainder of the points illustrated in Fig. 2 are from unspecified sites in Blanco County, apparently in the general vicinity of the town of Blanco. Anderson's catalogue reads: "Specimens found singly here and there in the fields and pastures are marked with serial numbers only, as well as other specimens which were given to me by friends."

The basal fragment shown at Fig. 2, A, is probably a Clovis point. Both faces show channel flake scars, one having a length of 23 mm., the other extending the full length of the fragment; but the lateral edges of both faces exhibit rather neat retouching. The material is gray flint, as is revealed by a fresh flake scar on one face, but patination has produced a mottled surface. This fragment is very similar in size and outline to the Clovis fragment from Bee County Site No. 1 (Sellards, 1940: Plate 1, No. 8).

Three points in this Blanco County series may be classified as Plainview points (Fig. 2, B-D), and two additional specimens (E-F) may eventually be recognized as belonging to a regional variant of the Plainview type.

Two of these points (B, C) come very close to duplicating Plainview points from the type site. The basal fragment at B is virtually identical with the specimen illustrated by Sellards *et al* in Fig. 5 (1947: 934; see

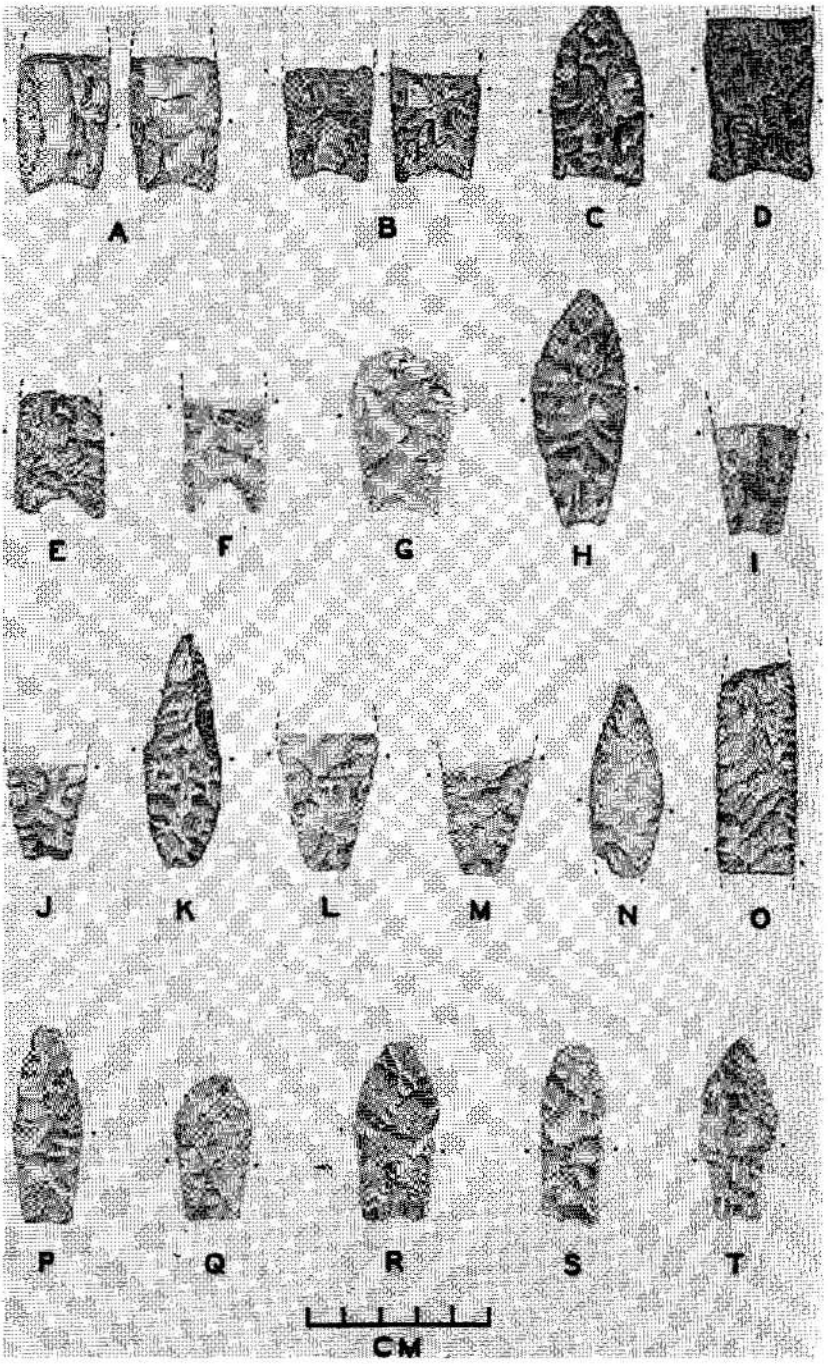

FIG. 2. Projectile points from surface of various archeological sites in Blanco County, Texas. Dots indicate extent of lateral smoothing.

also Plate 3, No. 6, and Plate 4, No. 3), even to the presence of fairly large basal thinning scars. This point is of brownish-gray flint that has patinated to a mottled bluish-gray. The base and lateral edges have been smoothed. The complete point at C also approximates two specimens from the Plainview type site (*ibid.*, Plate 4, No. 2; Plate 5, No. 3). This point is patinated to a creamy tan, but one face shows heavier patination than the other. The flake scars are irregular, the base has been thinned by removal of short flakes, and the base and lateral edges have been smoothed.

Shown at D is a basal fragment of what must have been a fairly long point with slightly flaring concave base. The material is creamy white, and both faces appear to be strongly patinated, one slightly more than the other. The flake scars are irregular, and the base has been thinned by removal of two fairly long flakes on each face. It is possible that the fragment from Tamaulipas reported by R. de la Borbolla and Aveleyra (*op. cit.*) may have been very similar to this point. Their reconstruction of the base could have shown a slightly greater flare. In size and outline the closest approximation to this point from Blanco County is to be found in the series of Plainview points from the Red Smoke site of Nebraska (Davis, 1953: Fig. 133, b). It also compares favorably with a large Plainview point from the Long site of South Dakota (Hughes, 1949: 270 and Fig. 68, r).

Two basal fragments (Fig. 2, E, F) have deep basal concavities and resemble the Plainview point reported by R. de la Borbolla and Aveleyra (*op. cit.*) from Tamaulipas. The principal difference lies in the slight basal flare of the Tamaulipas point. E is made of brownish-gray flint and one face is patinated to a creamy white; F is made of tan flint. The flake scars on both points are irregular, and the bases are thinned by removal of numerous small flakes. In each the basal concavity and lateral edges have been smoothed. These points, as well as the specimens from Tamaulipas, differ from the classic Plainview points in greater depth of the basal concavity. If they are Plainview points, they may represent a regional variant.

The typology of the Angostura point is not yet very clear. The series from the Long site of South Dakota (Hughes, 1949: 270 and Fig. 68, l-q) indicates that the Angostura point is lanceolate in outline with a narrow base that may be concave, straight, or convex. This overlaps the series of points from Agate Basin, Wyoming, illustrated by Roberts (1951). In the Blanco County collection there are eight points (Fig. 2, G-N) that appear to conform with the Angostura type as originally defined by Hughes. All are lanceolate in outline, have relatively narrow bases, and have ground bases and lateral edges. The bases, however, vary from concave (G-J) to straight (K-M). The material is either tan or gray flint, and three specimens (I, L, M) show considerable patination. One point (H) appears to have been rechipped at the distal end, and another (K) has an alternately beveled distal portion. The points with the narrowest bases have been thinned by removal of very short flakes and are thus thick near the base.

The lanceolate specimens with straight or concave bases, shown in Fig. 2, P-T, may be variants of the Angostura point, but at present we prefer to withhold judgment. All exhibit grinding on the base and lateral edges, and some of them appear to have been rechipped at the distal end. One (T) is alternately beveled on the proximal portion. They show about the same degree of patination, their surfaces being mottled gray with occasional pinkish spots. Some of these resemble points from Agate Basin,

Wyoming (Roberts, 1951) and from Nebo Hill, Missouri (Shippee, 1948).

The medial fragment in Fig. 2 at O shows serration and alternate beveling of the distal portion, and one lateral edge has been ground. This flint point is patinated to a creamy tan color.

SUMMARY AND CONCLUSIONS

Two localities in the southern part of Texas, one in Bexar County, the other in Blanco County, have yielded a considerable number of projectile points that are usually referred to the Paleo-Indian horizon of North America. All of these specimens were collected from the surface at or near sites also yielding artifacts of the Edwards Plateau Aspect and other later cultures. The points from Bexar County, however, were collected from a restricted area in a large site, which suggests that they may belong to a separate occupation.

The points from these two localities include one Clovis point (Blanco County), at least five Plainview points (two from Bexar County, three from Blanco County), at least eleven Angostura points (three from Bexar County, eight from Blanco County), and a number of other lanceolate points that are difficult to classify at present. This sample, which is derived from two large private collections, indicates that Paleo-Indian points must be relatively numerous in the southern part of Texas. Although commonly associated with Archaic artifacts, on typological grounds there is no good reason for assuming that these Paleo-Indian styles of points were also made by Archaic peoples. We feel that some of the associations reported in this paper are explainable in terms of successive occupations of the same site by different cultural groups. Others may be due to the occasional collection of earlier points by Archaic peoples either for re-use or out of sheer curiosity. Possibly some are to be explained in terms of contemporaneity or overlap in time, as indicated by the data from Bee County Site No. 1; but against this we have to place the stratigraphic isolation of specific types in the Great Plains region. This problem, which is by no means unique to the area under consideration, calls for concentrated field investigation—a search for critical sites and the testing of those sites by extensive excavation.

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