ARCHAEOLOGICAL INVESTIGATIONS IN THE MELVERN RESERVOIR
OSAGE COUNTY, KANSAS 1967

by

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ENVIRONMENTAL SETTING

Osage County lies within the Osage Cuestas, a minor division of the Osage Plains section of the Central Lowlands province (Wedel 1959:13). The Osage Cuestas are made up of a succession of east facing limestone escarpments separated by flat to gently rolling plains. Differential erosion of alternating strata of limestone and less resistant shale has produced this distinctive topography (Schoewe 1949:280-288).

Originally the rolling plains between stream valleys were dominated by big bluestem which supported abundant bison and antelope populations. The immediate valley floors were heavily timbered with hardwoods such as oak, black walnut, elm, and sycamore. These timbered lowlands supported an abundant mammalian fauna including elk, deer, raccoon, opossum, flying squirrel, and many smaller animals. Fowl inhabiting the area included turkey, prairie chicken, ruffed grouse, and quail (Wedel 1959:14).

Osage County is in the wettest portion of Kansas, often receiving in excess of 30 inches of precipitation a year. The mean annual temperature is approximately 55 degrees. The average coldest day of the year falls in January, when the temperature is approximately 31 degrees; while in the summer the average temperature is 79 degrees in July. In the spring, the last frost usually comes about April 21, and is followed by a frost-free growing season of approximately 179 days which terminates about October 17, the average date of the first killing frost in the fall (Flora 1949).
THE JONES SITE
(140S3)

Site 140S3 (Fig. 1) was marked by a concentration of artifacts on the north and south sides of an abandoned meander scar believed to represent a former channel of the Marais des Cygnes River. The abandoned meander is on the east side and adjacent to the present channel of the river. Although the number 140S3 has been assigned to the materials adjacent to the meander scar, it should be noted that cultural debris is continuous on the surface of the ground into the area previously designated 140S312 (Smith and Birkby 1962:34). It is possible that 140S3 is a portion of site 140S312.

Two concentrations of daub, arbitrarily designated Areas A and B, situated on the north side of the meander scar, were excavated. Structural remains were discovered in Area A, but Area B yielded no evidence of a house. A third arbitrary area (Area C) was designated to refer to a concentration of artifacts on both sides of the meander scar.

A road grader, furnished by the Kansas State Highway Commission, was used to scrape 10 cm. of the plow zone from the areas of daub concentration (Areas A and B), and a grid of 2 m. contiguous squares was established over the cleared area. For vertical control, 10 cm. arbitrary levels were used. Initial testing in Area A produced a charred post at the depth of 15 cm. below the surface of the ground. Further testing was then confined to adjacent squares and, as the periphery of the house...
was defined, the grid plan was abandoned and the floor area cleared.

The periphery of the house, as defined by the posthole pattern, closely corresponded to the periphery as defined by a series of contours based on patterns of distribution of daub fragments. The patterns of distribution were determined by counting the number of daub fragments in 10 cm. square samples spaced 1.0 meter apart over the entire area across which the daub fragments were spread. Differing intensities of occurrence allowed contour lines to be drawn, which corresponded very closely to the periphery of the structure as defined by excavation.

FEATURES

House 1:

Surface indications: In an aerial photograph, the house appeared as an oval stain, lighter in color than the surrounding soil. A surface survey revealed a concentration of grass-impressed daub and associated artifacts in and around the oval area.

Floor dimensions: 5.7 m. (east-west) by 7.2 m. (north-south). Average depth was 30 cm. below the present surface of the ground. The floor area is assumed to be contained within the peripheral posts and postholes.

Floor: There was no recognizable hardness or color change marking the level of the floor.

Roof supports: Major roof supports are represented by three charred posts and a large posthole, arranged in a diamond pattern, about 1 m.
Fig. 2. Map of site 140S3 showing the location of House 1 and inter site areas.
south of the exact center of the structure. The 9 peripheral posts form an oval pattern at a distance of 1 to 2 m. from the central supports of the house. Peripheral posts were represented by both charred posts and postholes ranging from 19 cm. to 31 cm. in diameter. Average post size was 24 cm. in diameter.

**Entrance:** A large charred post stub with 2 limestone wedges, a large posthole with a single limestone wedge, and a cluster of smaller postholes on the south end of the structure may represent the entrance.

**Hearth:** An interior hearth was not located. Tests made outside the house failed to locate fireplaces.

**Storage pits:** None were located.

**Associations:** The house is situated about 125 m. south of a house previously excavated by a University of Kansas field party at the Wiley site (140S312) (Moore and Birkby 1964:31-33). It is possible that site 140S3 represents a portion of site 140S312.

**AREA B**

Grass-impressed daub was found scattered over an area approximately 10 x 12 m. in size, 80 m. southwest of House 1. Extensive testing failed to reveal additional evidence of a structure in this area, and it is assumed that structural remains were destroyed by recent farming activities. It is also possible that a structure, less permanent than House 1, may have existed in this area.
Fig. 3. Plan of House 1.
LIMITS OF EXCAVATION

CHARRED POST
POSTHOLE
POSSIBLE POSTHOLE

140S3
HOUSE 1
MELVERN RESERVOIR

METER
Fig. 4. House 1 after excavation.

Fig. 5. Charred post stub typical of those encountered during excavation of House 1.
ABSTRACT

During the summer of 1967, a field party from the Department of Anthropology at the University of Kansas conducted salvage investigations in the proposed Melvern Reservoir on the Marais des Cygnes River in eastern Kansas. An intensive survey of the reservoir area produced 13 previously unrecorded sites, six of which were assigned to Central Plains phase or Plains Woodland affiliations. One site, 140S34, represents a possible preceramic occupation.

Excavations were carried out at 4 sites: 140S312, a habitation site with Plains Woodland and Central Plains phase affiliations; 140S3, a Central Plains phase habitation site; 140S4, a burial mound with unknown affiliations; and 140S34, which may represent an Archaic occupation.
AREA C

Artifacts were found scattered over an area approximately 200 m. x 50 m. on both sides of the abandoned meander. One meter square test pits were excavated wherever flake and stone concentrations were encountered on the surface. The test pits revealed that cultural debris did not continue below the plow zone, and that it was disturbed by erosion and continuous farming activities.

ARTIFACTS

Rim Sherds
Group 1

SAMPLE: 6 rims. (Fig. 6 a, b)

PASTE:

Temper: A sparse scattering of clay or shale inclusions, from .5 mm. to 3 mm. in diameter, occur with rust-colored mineral inclusions ranging in size from .2 mm. to 2 mm.

Texture: Medium, well compacted, angular fracture.

Color: Surface color ranges from tan to brown. Core color ranges from brown through gray to nearly black.

Surface treatment: Interior surfaces are smoothed. Exterior surfaces exhibit parallel rows of vertical cordmarks spaced from 1 mm. to 4 mm. apart. In only one case do the cordmarks cross.
FORM:

Lip: Lips are rounded and range in thickness from 3 to 5 mm. One example has a slightly rolled outer edge.

Rim: With one exception, rims are straight with an average thickness of 9.6 mm. The exception measures 16.8 mm. in thickness.

Shoulder: Two rims retain a portion of the shoulder. In both cases the angle of the juncture of the rim and shoulder is 150 degrees.

Remarks: Two specimens have decorated lips. One bears evenly spaced (3 mm.), oblique cordmarks on the lip, while the other has a row of punctates on the exterior of the rim immediately below the lip.

GROUP 2

SAMPLE: 1 rim. (Fig. 6,c)

PASTE:

Temper: Similar to Group 1.

Texture: Fine, well compacted, angular fracture.

Color: Surface and core color is buff.

Surface treatment: The interior surface is well smoothed and the exterior surface exhibits parallel rows of vertical cordmarks spaced from 1 to 2 mm. apart.
FORM:

Lip: Flat, 3 mm. in thickness.

Rim: Straight, with beveled interior surface. The specimen is thickest at a point 1 cm. below the lip. Decoration consists of a shallow groove on the external edge of the lip.

Remarks: Features which allow the placement of this specimen in a separate group are:

1. A differing decoration on the exterior of the lip.
2. The form of the rim (beveled interior surface).

BODY SHERDS
Group 1

SAMPLE: 55 specimens.

PASTE:

Temper: A sparse scattering of clay or shale inclusions, ranging from .6 mm. to 3 mm. in diameter, occurring with rust-colored mineral inclusions ranging in size from .2 mm. to 2 mm.

Texture: Medium, well compacted, angular fractures.

Color: Surface colors range from buff through gray to nearly black. Firing clouds are present.

Surface treatment: Interior surfaces have been smoothed. Exterior surfaces exhibit parallel rows of cordmarks. On several of the specimens the cordmarks are crossed.

FORM:

Thickness: Thickness ranges from 5 to 12.1 mm. Mean thickness
is 8 mm. Mode is 8 mm.

BODY SHERDS
Group 2

SAMPLE: 3 specimens.

PASTE:

Temper: Similar to Group 1.

Texture: Coarse, due to projecting inclusions. Well compacted, with angular fractures.

Color: Exterior color is buff and core color is light gray. Surface color of sherds in this group is lighter than for most other body sherds from the site.

Surface treatment: Interior and exterior surfaces have been lightly smoothed.

FORM:

Thickness: Thickness ranges from 3.9 to 7 mm. Average thickness if 8.1 mm.

CHIPPED STONE ARTIFACTS

Projectile points:

1. Triangular outline, slightly convex edges, side and basal notches, bi-convex cross section. Sample, 1 specimen. Length, 19 mm.; width, 11 mm.; thickness, 2.5 mm. (Fig. 6, d).

2. Triangular outline, slightly convex edges, straight base, bi-convex
cross section. Sample, 1 specimen. Length, 24 mm.; width, 12 mm.; thickness, 2.5 mm.

3. Triangular outline, slightly concave edges, concave base, large corner notches, bi-convex cross section. Sample, 1 specimen. Length, 34.5 mm.; width, 23.8 mm.; thickness, 7 mm. (Fig. 6,e).

Scraper:

1. Side scraper, plano-convex cross section, roughly rectangular in outline, graver-like projection at one end. Sample, 1 specimen. Length, 25.1 mm.; width, 19.1 mm.; thickness, 7 mm. (Fig. 6,f).

Drill:

1. Triangular outline, chisel shaped expanding base, bi-convex cross section. Sample, 1 specimen. Length, 37 mm.; width, 19.8 mm. tapering to 6.5 mm. (Fig. 6,g).

Knives:

1. Ovate outline, bi-convex cross section, bifacial flaking. Sample, 2 specimens. Length, 50.3 and 54.2 mm.; width, 22.8 and 29.1 mm.; thickness, 8.2 and 18.2 mm. (Fig. 6,h).

2. Trianguloid outline, convex edges, straight base, bi-convex cross section. Sample, 1 specimen. Length, 51.2 mm.; width, 23.8 mm.; thickness, 7.2 mm. (Fig. 6,i).

GROUND STONE ARTIFACTS

Ground Hematite:

1. Irregularly-shaped fragments of hematite with ground, faceted surfaces. With one exception, the specimens are ground on one or two
sides only. In the case of the exception, the entire mass has been ground. Sample, 3 specimens. Length, 15.4 to 49.3 mm.; width, 13.8 to 33.8 mm.; thickness, 3.1 to 25.6 mm.

Ground limonite:

1. One face of an irregularly-shaped fragment of limonite bears deep, random striations. Sample, 1 specimen. Length, 28.5 mm.; width, 18.9 mm.; thickness, 0.8 mm.

Axe or celt fragment:

1. Poll end of a pecked and ground stone axe. Sample, 1 specimen. Length, 31.1 mm.; width, 53.2 mm.; thickness, 35 mm.

SUMMARY

Area A at 140S3 yielded a structure and artifacts similar in characteristics to those described by Witty for the proposed Pomona focus (Witty 1967:2). Specific similarities are: Oval house plan lacking evidence of a hearth; the presence of clay tempered, cord roughened pottery; and triangular, with side and basal notched, projectile points.

A structure excavated in 1962 on the adjacent Wiley site (140S312), 125 m. north of House 1, is similar in size and shape to the structure excavated on 140S3. Paired structures are mentioned by Witty in his Pomona trait list (Witty 1967).
Fig. 6. Sherds and chipped stone artifacts from 140S3.

Length of i, 5.03 cm.
Attempts to relocate a burial area partially excavated by the University of Kansas in 1962 (Smith and Birkby 1962:34) proved futile. An area of 1.5 acres was cleared of crops and plow zone by a road grader furnished by the Kansas Highway Commission. By line-of-sight triangulation using map data from the 1962 expedition, it was planned that the northern edge of the graded area would correspond to the southern edge of the previous excavations, but the lack of sufficient map data and the presence of tall corn made this limit approximate.

When it became evident that the cleared area did not correspond to the edge of the previous excavations, test pits, 2 x 2 m. square and 60 cm. deep, were spaced through the cleared area, and auger holes and 1 x 1 m. test pits were made in the uncleared corn around the cleared area. No indication of former excavations or additional human skeletal material was found. Phosphate tests, made in each 20 cm. level of the test pits and auger holes, failed to indicate the presence of skeletal material in the soil.

Tests made in the uncleared corn north of the graded area revealed a concentration of burned limestone at a depth of 40 cm. below the surface of the ground. Cultural debris in other areas of the site was
confined to a depth only slightly greater than the plow zone, so it is possible that the greater depth of artifacts and burned stone in Area B represents an earlier occupation. Cordmarked pottery and a large corner notched projectile point were recovered from the excavations at a depth of 40 cm. Moore and Birkby (1964:38) list a Plains Woodland component among the cultural affiliations of the Wiley site.

AREA C

Fifteen meters south of the hearth area (Area B), a 2 x 6 m. concentration of artifacts was encountered immediately below the plow zone. The western end of the scatter included flakes of chert, several sandstone fragments, and a chipped stone knife (Fig. 8, g) surrounded by flakes of the same gray chert. The remainder of the scatter was composed of flakes, sandstone and limestone fragments, and cordmarked sherds.

A grid of 2 m. squares was established over the area and all cultural material encountered was plotted. Excavation revealed that the cultural debris did not exceed a depth of 5 cm. below the plow zone.

ARTIFACTS

Rim Sherds
Group 1

SAMPLE: 5 rims. (Fig. 8, a)

PASTE:

Temper: In 4 specimens, tempering consists of a sparse scattering of clay or shale inclusions ranging in size from
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Fig. 7. Map of site 140S312 showing location of areas excavated in 1962 and 1967.
ABANDONED MEANDER
AREAS EXCAVATED IN 1967
AREAS INVESTIGATED IN 1962
.5 to 3 mm. in diameter, which occur with rust-colored inclusions. One specimen contains angular holes from .5 to 3.2 mm. in size. The holes represent leached out tempering material, possibly limestone.

Texture: Medium, well compacted, with angular fractures.

Color: Surface colors are red-brown and tan. Core colors range from buff to nearly black.

Surface treatment: Interior surfaces have been smoothed.

Exterior surfaces exhibit parallel rows of vertical cord-marks spaced from 2 to 3 mm. apart.

FORM:

Lip: On all specimens, lips are rounded and range from 2 to 4 mm. in thickness.

Rim: All rims are straight and range from 6 to 9 mm. in thickness.

Shoulder: One rim retains a portion of the shoulder. The angle of the juncture of the rim and shoulder is about 140 degrees.

Remarks: Additional decoration consists of oblique cord-marks on the lip of the "hole tempered" specimen.

RIM SHERDS
Group 2

SAMPLE: 1 rim.
Surface Treatment: Exterior surfaces exhibit parallel rows of cordmarks. Interior surfaces have been smoothed. On several of the specimens the cordmarks are crossed obliquely.

FORM:

Thickness: Thickness ranges from 4 to 10 mm. Mean thickness is 6 mm. The mode is 6 mm.

Remarks: Two specimens warrant special mention. One is the thickened base of a vessel, and the second has a conical hole 9 mm. in diameter drilled through it from the exterior surface (Fig. 8,c). The basal sherd bears a pointed projection which tapers from a thickness of 20 mm. to 9 mm.

One plain sherd, 9 mm. in thickness, was recovered. Aside from the absence of cordmarking, it is similar to the sherds described above.

CHIPPED STONE ARTIFACTS

Projectile Points:

1. Triangular outline, slightly convex edges, straight base, bi-convex cross section. Sample, 1 specimen. Length, 15 mm.; width, 15 mm.; thickness, 4 mm.

2. Triangular outline, slightly convex edges, corner notched, bi-convex cross section. Sample, 2 specimens. Length, 55 and 20 mm.; width, 39 and 11 mm.; thickness, 8 and 2 mm. (Fig. 8,d).
3. Triangular outline, serrated edges, expanding stem, bi-convex cross section. Sample, 1 specimen. Length, 24 mm.; width, 11 mm.; thickness, 3 mm. (Fig. 8,e).

4. Triangular outline, convex base, corner notches, bi-convex cross section. Sample, 1 specimen. Length, 50 mm.; width, 30 mm.; thickness, 10 mm.

5. Triangular outline, straight base, side and basal notches, plano-convex cross section. Sample, 2 specimens. Length, 18 mm. (both specimens); width, 10 and 13 mm.; thickness, 2 mm. (both) (Fig. 8,f).

Knives:

1. Triangular outline, convex edges, straight base, bi-convex cross section. Sample, 1 specimen. Length, 40 mm.; width, 20 mm.; thickness, 7 mm. (Fig. 8,g).

2. Rounded outline (broken specimen), bi-convex cross section, no secondary or retouch flaking evident. Sample, 1 specimen. Length, 50 mm.; width, 52 mm.; thickness, 26 mm.

GROUND STONE ARTIFACTS

Hematite:

1. Irregular fragment of hematite with ground surfaces. Sample, 1 specimen. Length, 18 mm.; width, 13 mm.; thickness, 5 mm. (Fig. 8,h).

Galena:

1. Triangular piece of ground galena with a groove at the tapered end.
Possibly a pendant. Sample, 1 specimen. Length, 15 mm.; width, 13 mm.; thickness, 5 mm.

Abrader fragments:

1. Rectangular pieces of sandstone with a deep "U" and "V"-shaped grooves on faces along the long axis. Sample, 2 specimens. Length, 43 and 22 mm.; width, 27 and 24 mm.; thickness, 24 and 25 mm. (Fig. 8, j).
Fig. 8. Sherds and chipped stone artifacts from 140S312.

Length of $g$, 4.0 cm.
140S34

140S34 is located on a low terrace above the flood plain, approximately 11 m. south of the Marais des Cygnes River. The site is bordered on the north by the woods lining the river; on the west by trees bordering Cable Creek; on the south by woods; and on the east by pasture and a prominent ridge, a local feature known as Indian Point. A major concentration of cultural debris is located in the north-central portion of the field. This area is covered with a profuse scattering of flakes, burned stone, burned earth, bone fragments, and stone artifacts.

A grid of 8 contiguous 2 m. squares was established over a surface scatter of burned limestone. The plow zone was removed as a unit exposing a cluster of burned stone presumed to be a hearth.

**Surface Indications:** A concentration of burned stone and a scatter of cultural debris was noted during survey of the area. The concentration of stone was selected for excavation when a stake marking the area could not be driven into the surrounding soil due to the intense cluster of stone below the surface.

**Shape:** Roughly oval with the long axis trending east-west. The hearth is between one and two stones in thickness. It is evident, however, from the quantity of similar stones on the surface and in the plow zone, that the hearth had originally been much thicker. It is believed that plowing removed the upper portions of the hearth.

**Dimensions:** 2 x 6 m. Thickness of the hearth averages 15 cm.
Sterile soil was encountered below the layer of stones at 31 cm. below the surface of the ground. Individual stones averaged from approximately 20 to 30 cm. in diameter.

**Types of stone:** The hearth was composed of limestone, most of which exhibited some evidence of burning. Sandstone fragments, generally smaller in size than the limestone, were evident in smaller numbers and were both burned and unburned.

**Remarks:** A scatter of flakes and several ovoid end scrapers were found in association with two small concentrations of sandstone fragments on the south side of the hearth. Phosphate tests made in the area of the excavations indicated a greater concentration of bone material in the soil on the north side of the hearth, extending approximately 15 m. to the north. No charcoal or burned earth was found in association with the hearth.

**Artifacts:** Artifacts from the site include fragments of corner notched and stemmed projectile points and ovoid end scrapers. No ceramics were found in association with the hearth.

Two hearths, similar to the one excavated at 140S34, were excavated in the reservoir area in 1962 on the Turkey Creek site (140S1) (Moore and Birkby 1964:59-64). A problem in assigning a cultural affiliation to these sites on which ceramics are not encountered is presented by the presence of projectile point types with long temporal spans. Wedel
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(1959:538-542) notes that stemmed and corner notched projectile points appear on Archaic and Woodland sites. Site 140S34 could represent occupation by peoples of either period, although the lack of ceramics on the site suggests a date prior to the introduction of pottery into this area. This is believed to be around A.D. 1 (Shippee 1967:2). This confusion echoes problems stated previously (Moore and Birkby 1964:76). Is Woodland basically Archaic, and did stonework diversify at the time of the introduction of pottery? Is Woodland simply Archaic with the addition of pottery?
Fig. 9. Hearth on 140S34 after excavation.
THE JUDY HAMMOND SITE (140S4)

BURIAL CAIRN:

Surface indications: A layer of limestone slabs protruding from the surface of a large open field bordering on the Marais des Cygnes River. The occurrence of the slabs did not conform to natural geological conditions, suggesting human modification.

Previous excavations: A test pit was excavated and the lower portion of a human skeleton was removed by the 1963 field party (Moore and Birkby 1964:67).

Shape: The mantle of stone slabs was arranged in a roughly circular pattern.

Dimensions: Six meters in diameter and 50 cm. in depth.

Possible origin of stone: Limestone outcrops 20 m. west of the cairn in the side of the hill.

Burials: The disarticulated remains of at least 2 adults and 2 sub-adults were discovered at a depth of 50 cm.

Remarks: The skeletal material was encountered in two distinct areas. For the sake of convenience these two areas were labeled Burials 1 and 2 even though each "burial" represented the remains of more than one individual. A Corps of Engineers benchmark had been placed near the center of the cairn and was utilized as a septum and map table support.
The benchmark was between the two areas of bone and slightly to the north. Burial 2 was not as deep as Burial 1, which appeared to have been placed in a depression, slightly to the west of the center of the cairn. The oval depression was approximately 1 m. x 80 cm.

Laboratory analysis is now being carried out on the skeletal material at the Department of Anthropology at the University of Kansas.

Associated Artifacts: None. The closest site is 140S26, which is located approximately one-fourth mile to the south. 140S26 is a possible Plains Woodland site.
Fig. 10. Burials excavated on the Judy Hammond site (140S4).

Fig. 11. Location of burials within burial cairn on 140S4.
THE LITCH SITE (140S23)

The Litch site, located during the course of survey activity in 1967, was marked by a scattering of burned limestone and artifacts along the north bank of the Marais des Cygnes River in an area approximately 100 m. long by 30 m. wide. Burned limestone was exposed in the cut bank of the river below the plow zone. Three 1 m. x 2 m. test trenches and an area 2 m. x 6 m. were excavated to a depth of 40 cm. No artifacts were recovered during the excavation, although burned stone and waste flakes were found. All artifacts described below were collected from the surface.

ARTIFACTS

POTTERY

Pottery from the site is limited to 2 specimens from the surface. Both are body sherds (Fig. 12,a). Temper consists of grit from .1 to .3 mm. in diameter and the texture is fine to medium fine. Both specimens exhibit angular fractures. Core colors are black and surface colors are buff and black. Interior surfaces of the specimens have been smoothed, and exterior surfaces exhibit parallel rows of cordmarks which have been partially obliterated. Thicknesses are 3.5 and 5 mm.

CHIPPED STONE ARTIFACTS

Projectile Points:

1. Triangular outline, convex base, large corner notches, bi-convex cross section. Sample, 1 specimen. Length, 41 mm.; width, 25 mm.; thickness, 5 mm. (Fig. 12,b).
2. Triangular outline, convex edges, straight base, large corner notches, bi-convex cross section. Sample, 1 broken specimen. Length, 40 mm.; width, 25 mm.; thickness, 5 mm. (Fig. 12, d).

3. Triangular outline, straight base, unnotched, bi-convex cross section. Sample, 1 broken specimen. Length, 22.5 mm.; width, 25 mm.; thickness, 5 mm. (Fig. 12, d).

Knives:

1. Square base with rounded corners, parallel sides tapering to a convex tip. The larger specimen has a broad scraping surface at the basal end (Fig. 12, f). Sample, 2 specimens. Length, 79 and 52 mm.; width, 40 and 29 mm.; thickness, 18 and 5 mm. (Fig. 12, e, f).

Blades:

1. Rectangular outline, retouched edges, plano-convex cross section. Sample, 1 specimen. Length, 84 mm.; width, 21 mm.; thickness, 10 mm. (Fig. 12, g).

Miscellaneous Fragments of Projectile Points or Knives:

1. Tip fragments, bi-convex cross section. 3 specimens.

2. Tip fragment, plano-convex cross section. 2 specimens.

3. Medial fragment, bi-convex cross section. 1 specimen.

4. Basal fragment, concave base, bi-convex cross section. 1 specimen.

5. Basal fragment, straight base, bi-convex cross section. 1 specimen.
Scrapers:

1. Triangular outline, convex edges, plano-convex cross section, one thick, broad scraping end tapering to a narrow base. Sample, 2 specimens. Length, 29 mm.; width, 21 mm.; thickness, 10 mm. (Fig. 12, h).

GROUND STONE ARTIFACTS

Abrader:

Irregularly-shaped sandstone fragment with parallel grooves on four sides. Sample, 1 specimen. Length, 100 mm.; width, 80 mm.; thickness, 60 mm.

SUMMARY

Similar sub-surface concentrations of burned stone, lacking associated artifacts, were encountered during testing of sites 140S26 and 140S28. These clusters of burned stone were located on or slightly above sterile clay. In no case did the soil below the stones exhibit evidence of intense burning, although small flecks of charcoal were evident in the fill between the stones. Due to the lack of diagnostic artifacts, no cultural affiliation can be made.
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140S19

Site 140S19 is situated on a terrace on the north bank of the Marais des Cygnes River. Artifacts, both historic and prehistoric, were concentrated on the highest portion of the terrace. A trench composed of 2 m. contiguous squares was excavated in the area of artifact concentration. With the exception of a shell-filled pit, discussed below, artifacts were found only in the plow zone.

Historic artifacts from the site include: crockery, china, glass, metal, bottle, and brick fragments. All date from the latter part of the nineteenth century.

Ten meters south of the test trench, an area of scattered fragments of fresh water mussel shells, previously disturbed by the plow, was excavated. Within the mass of compacted shells, were a single glazed crockery fragment and a cordmarked sherd. Unfortunately, no other artifacts were found directly in association with the shells, so a positive identification of cultural affiliation cannot be made.
ADDITIONAL SITES SURVEYED AND TESTED

140S20

This site is located on a terrace north of the junction of the Marais des Cygnes River and an unnamed tributary. Cultural debris is scattered over an area 50 x 80 m.

The site was tested by means of ten, 1 m. square pits, which revealed that cultural material was not present below the plow zone. It was concluded that the site had been destroyed by erosion and plowing.

Although no diagnostic lithic artifacts were found, pottery from the surface suggests a Central Plains phase affiliation.

Pottery from the site includes 6 cordmarked body sherds and 1 cordmarked rim sherd. Temper in all of the specimens consists of clay and mineral inclusions.

140S21

The location of this site is on the north bank of the Marais des Cygnes River, and west of an unnamed tributary of the river. The site consists of a scatter of artifacts approximately 50 m. in diameter on the terrace bordering the river.

Tests at the site consisted of three, 1 m. square pits, which revealed that there was no depth to the cultural debris.

Lithic and ceramic artifacts from the site are indicative of the Central Plains phase.
A medial fragment of a double beveled knife was found on the surface as was a single, plain body sherd. Temper in the sherd consisted of clay and mineral inclusions.

140S24

This site is located in the flood plain on the north side of the Marais des Cygnes River. Artifacts were sparsely scattered over an area adjacent to the river. A concentration of fresh-water mussel shells, covering an area approximately 3 m. in diameter, was noted.

Pottery from the site suggests a Central Plains phase affiliation.

Eleven cordmarked body sherds, all with clay and mineral inclusions, and a single triangular, corner notched projectile point with beveled edges, constitute the artifact inventory from the site.

140S25

140S25 consists of a thin scattering of cultural debris on a terrace above the north bank of the Marais des Cygnes River, and west of the junction of the river and an unnamed, intermittent tributary.

The site was tested with 1 m. square pits. Information gained from the tests indicated a lack of depth to the cultural material.

Artifacts recovered from the surface indicate a Central Plains phase affiliation.

Artifacts from the site include a fragment of a reverse beveled knife, one large ovate knife, and one plain body sherd.
140S26

The site consists of clusters of burned fragments of limestone on the surface of a terrace on the northeast side of the Marais des Cygnes River.

The site was tested with six 1 m. square pits. Burned limestone fragments and cultural materials were limited to the plow zone, so it is assumed that the site has been destroyed by plowing and erosion.

The limited lithic sample from the site suggests a Plains Woodland occupation.

Artifacts found were two, large, corner notched projectile points.

140S27

140S27 is situated on rises above and below meander scars running roughly east-west near a present meander of the Marais des Cygnes River. The site is approximately 50 m. from the present river channel, and consists of a sparse scattering of cultural debris.

After testing the site with numerous 1 m. square pits, it was concluded that all features had been destroyed by plowing and erosion.

All artifacts recovered were from the surface, and seem indicative of a Central Plains phase occupation.

Two chopper fragments, a fragment of a side scraper, and two, un-notched, projectile points constitute the total sample of artifacts from the surface.
140S28

140S28 is situated west of site 140S27, and east of a present meander of the river, on a terrace.

Testing consisted of ten, 2 m. x 1 m. square pits and four, 2 m. square pits. The tests revealed clusters of burned limestone at a depth of 20 cm., but without associated artifacts.

Pottery from the surface of the site suggests a possible Central Plains phase affiliation.

Artifacts from the site consist of cordmarked body sherds and a triangular projectile point with three side notches (two notches in one edge and one in the other) and a basal notch.

140S29

The location of this site is the flood plain west of the junction of Cable Creek and the Marais des Cygnes River. The site is represented by a scattering of cultural debris extending 50 m. from the river.

On the basis of meager surface indications, a decision was made not to test the site.

Due to the lack of diagnostic artifacts, no cultural affiliation can be assigned to the site.

Although no artifacts were recovered, the surface of the site was littered with waste flakes and bone fragments.
140S30

This site is in the flood plain north of the Marais des Cygnes River and is across the river from site 140S31. The site is marked by a scattering of cultural debris immediately adjacent to the river. Woods border three sides of the site.

Meager surface remains indicated that testing was not warranted.

Cultural affiliation cannot be assigned to the site due to the absence of diagnostic artifacts.

Artifacts from the site are limited to one ovoid end scraper.

140S31

This site, south of the Marais des Cygnes River, occupies both sides of an abandoned meander scar.

Meager surface indications suggested that further investigations were not warranted.

Diagnostic artifacts are lacking.

The very limited sample of artifacts from the site consists of a single, clay tempered body sherd, and the broken medial portion of a knife or projectile point.

140S32

Site 140S32 is situated on the top of a prominent ridge, south of the
Marais des Cygnes River. The site is surrounded on the north and the west by limestone outcrops, and on the east and south by sloping land. The site consists of a scatter of artifacts, approximately 50 m. in diameter, on a low knoll at the extreme northern edge of the flat area that surmounts the ridge.

The site was tested with six, 1 m. square, pits. The tests indicated that the site had been destroyed by plowing and erosion.

A small serrated projectile point, a large stemmed projectile point, and a large chopper suggest a Plains Woodland affiliation, while a double beveled knife seems indicative of the Central Plains phase. This was the only habitation site encountered in the Melvern Reservoir area that was not adjacent to the river.
Fig. 12. Pottery and chipped stone artifacts from 140S23 (the Litch Site), 140S25, and 140S32. Length of b, 41 m.
CONCLUSIONS

The preceding report has dealt with excavations carried out in the summer of 1967, by the Department of Anthropology at the University of Kansas, through an agreement with the National Park Service, in the Melvern Reservoir area. Testing and excavations were conducted at 14 sites. Efforts were concentrated on three sites: 14053, 14054, and 1405312.

Information gained from the 1967 excavations provides answers for many questions about the aboriginal occupation of the Melvern Reservoir area, but also raises many additional problems for consideration. That the area was occupied during preceramic times is evident from investigations at sites 14051, 140534, and 1405312. No dates are available at this time for any of these sites, although it would seem that they predate the introduction of pottery into the area at about A.D. 1 (Shippee 1967:2).

Information on this preceramic occupation is restricted to corner notched and stemmed projectile points, end scrapers, and hearths. All 3 sites are located on terraces above the river or its tributaries. It is possible that preceramic occupations of the area were centered away from the stream bottoms where survey and testing were concentrated, and that these occupations were more frequent than indicated by the meager evidence listed above.

Only meager evidence for Plains Woodland occupation of the reservoir
INTRODUCTION

During the period from June 15 to July 30, 1967, an archaeological field party from the Department of Anthropology at the University of Kansas conducted salvage investigations in the Melvern Reservoir Area in Osage County, Kansas. The project, supported by a contract with the National Park Service, was directed by Richard Sense, a graduate student at the University of Arizona. The author of this report served Mr. Sense in the capacity of field assistant.

During the 1967 field season, fourteen new sites were recorded in an intensive survey which covered the eastern half of the reservoir area. These are sites 140S19 through 140S21 and sites 140S23 through 140S34. Excavations were carried out on four sites: 140S3, 140S4, 140S34, and 140S312. The most extensive excavations were carried out on the Jones Site (140S3).

The Melvern Reservoir is to be located on the Marais des Cygnes River in Osage County, Kansas. An earthfill dam, to be constructed a mile west of U. S. Highway 75, will back up the river for approximately 14 miles. The conservation pool of 6,930 acres will, when increased during flood conditions, have a surface area of up to 13,950 acres. The U. S. Army Corps of Engineers has estimated the date for completion of the reservoir as 1970 (Anonymous 1966:ii). At the writing of this report, construction had begun on the dam and spillway in the area of 140S3 and 140S312.
was collected in 1967. This sparse evidence, which may be indicative of Woodland occupation, was encountered on 140S23, 140S32, and 140S312, in the form of projectile points and sherds. Data collected previously in the reservoir (Moore and Birkby 1964) indicates a more intensive Woodland occupation than suggested by the 1967 work.

The cord roughened, clay tempered pottery from sites 140S3, 140S19, 140S20, 140S21, 140S24, 140S28, 140S312, 140S314, and 140S315, is similar to types indicative of Central Plains phase occupations in the neighboring Pomona Reservoir (Witty 1967) and in Greenwood County (Calabrese 1967:94) approximately 35 miles southwest of the Melvern area. Similar pottery has been collected from sites generally in eastern Kansas, east of the Flint Hills, and from the Nebraska border to the Oklahoma border (Witty 1967:2).

Sites from which cordmarked, clay tempered sherds were collected represent the most intense occupation of the Melvern Reservoir. With the exception of three sites (140S2, 140S3, and 140S312), these sites are situated atop terraces above the flood plain on the north side of the river. Two of the sites which are on the south side of the river are located on the north side of a meander scar which possibly represents a former channel of the river.

The 9 sites from which clay tempered, cord roughened sherds were collected are clustered into groups of 2 or 3 sites. The clusters are from one-fourth to one and one-half miles apart and may indicate a settlement
pattern of small villages of a few houses scattered along the terraces of the river. Wedel notes a pattern of clustered dwellings on Upper Republican aspect sites in northwestern Kansas (Wedel 1964:95). It should be pointed out, however, that the only criteria used to identify the pattern noted above is the presence of pottery similar in temper and surface treatment. Detailed comparisons of larger samples, from the other eastern Kansas areas, may modify this pattern.

The only site excavated in 1967 which yielded an inventory sufficient to relate it to a specific focus is 140S3. The structure and artifacts recovered from 140S3 correspond to portions of a trait list compiled by Witty (1967:2-3) for the proposed Pomona focus. On the basis of similarities of house type (lacking hearth), pottery, and lithic artifacts, this site is assigned to the proposed Pomona focus. Dates on the focus are from A.D. 900 to 1300 (Witty 1967:4). A radio-carbon date of A.D. 1090 ± 100 years was obtained by the Kansas State Historical Society from excavations at site 140S305 in the nearby Pomona Reservoir where the Pomona focus was first defined.
TABLE 1
SITES LOCATED BY THE 1967 SURVEY OF THE MELVERN RESERVOIR

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<th>Disposition</th>
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<td>140S19</td>
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<td>Central Plains</td>
<td>Tested</td>
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<td>Archaic &amp; Woodland ?</td>
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OTHER SITES IN THE MELVERN RESERVOIR AREA TESTED OR EXCAVATED IN 1967

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<td>140S4</td>
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<td>Excavated</td>
</tr>
<tr>
<td>140S312</td>
<td>Archaic, Plains Woodland, Central Plains</td>
<td>Extensively Tested</td>
</tr>
</tbody>
</table>
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Witty, T. A.

Witty, T. A.

Through an agreement with the National Park Service, a preliminary archaeological survey of the reservoir area was made by Roscoe Wilmeth of the Kansas State Historical Society in 1958; a total of 9 sites, within the reservoir, were listed by Wilmeth. Cultural affiliations of these sites were tentatively identified with Central Plains, Woodland, and Archaic complexes (Wilmeth 1958:14-19).

During the summer of 1962, a field party from the University of Kansas, under the direction of Dr. C. S. Smith, conducted excavations and additional survey work in the Melvern Reservoir. Surface collections were made from six of the 9 sites listed by Wilmeth in 1958, and 4 additional sites were recorded. Surface collections from these 4 sites were found to be indicative of two complexes, Central Plains and Archaic. Major excavations were carried out at three sites 140S1, 140S312, and 140S314. Two Archaic hearths were excavated at site 140S1. 140S312 yielded 15 primary, flexed burials and associated artifacts identified as belonging to the Central Plains phase. 140S314, also a Central Plains phase site, yielded 2 houses (Smith and Birkby 1962:34-36).
Fig. 1. Map of the Melvern Reservoir showing the location of archaeological sites.
ARCHAEOLOGICAL SITES
IN THE
MELVERN RESERVOIR AREA
ADAPTED FROM C. H. E. MAP FILE 6-6-80

0 1 2 3 MILES