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DEPARTMENT OF ANTHROPOLOGY
WESTERN MICHIGAN UNIVERSITY

ARCHAEOLOGICAL REPORT NO. 2 1978

AN ARCHAEOLOGICAL SURVEY OF ALLEGAN COUNTY, MICHIGAN:
1977 TRANSECT SURVEY IN THE LOWER KALAMAZOO RIVER VALLEY

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1. Prehistoric Site Survey in the Kalamazoo River Basin

Western Michigan University has sponsored archaeological field work in the Kalamazoo River Valley for the last 10 years. For the most part this research has been carried out by the Department of Anthropology's archaeological field school, which has been located in the lower valley during all or portions of 6 field seasons: 1968, 1969, 1973, 1976, 1977 and 1978. Prior to 1976, the Department's field program was directed by Elizabeth Baldwin Garland; and since that time by Garland and William Cremin.

With the inception of the Kalamazoo Basin Archaeological Project in 1976, the research objectives of our program in this universe have necessitated that we initiate systematic site survey as a means of acquiring data which could be used to delineate and explain prehistoric land use patterns. To collect these data, the first in a series of cross-valley transect surveys was conducted in the Hacklander site environs as part of the 1976 field school (Figure 1). On this occasion the survey was supported entirely out of the field school budget. Since then our survey program has been funded by National Register grants obtained through the Michigan History Division, Michigan Department of State.

External funding for site survey in the Kalamazoo Basin has meant that we could employ full-time personnel to oversee the daily operations of the survey. And, moreover, that areas selected for investigation could be somewhat removed from the actual location of the field school. However, site survey has remained an integral part of our total field program, with students enrolled in the archaeological field school periodically departing the site being excavated on a rotational basis to participate in the survey under the

direct supervision of permanent personnel. This approach to conducting site survey has made it possible to investigate larger tracts of land than would otherwise have been possible, maintain a rigorous and systematic research design regardless of the composition of the survey team on any given day, and enable us to provide student archaeologists with essential supervised training and experience in site survey methodology.

In addition to our current tact of integrating the field school and survey programs, Garland has for a number of years worked with members of the Kalamazoo Valley Chapter of the Michigan Archaeological Society to conduct informal site survey in this drainage system. Sites recovered in this manner, together with additional information collected through landowner survey in 1973 as part of a larger project undertaken to assess both the natural and cultural resources of the area, have fecently been summarized by her (see Baldwin 1976). To the 225 sites reported by Garland for the greater Kalamazoo Basin can now be added the 24 sites found in 1976 and 62 sites recorded in 1977 (and described herein) during transect surveys carried out in the lower valley under Cremin's direction. And, at the time of this writing, 4 survey teams currently working in Allegan County have reported an additional 226 sites, bringing the total number recorded to date in the Kalamazoo Valley to 537 prehistoric sites.

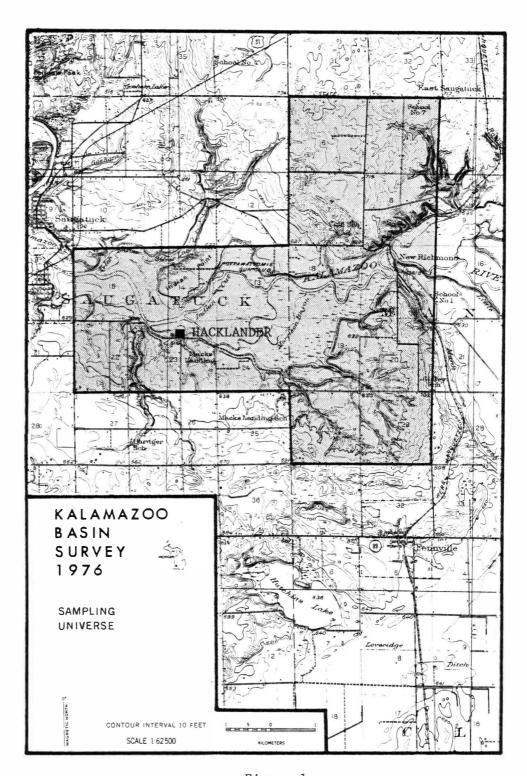


Figure 1

2. The 1977 Project Area

The 1977 transect commences at a point 22.5 km above the mouth of the Kalamazoo River and 9 km upstream from the 1976 survey universe. It is located in an area of nearly level to gently rolling and, occasionally, steep topography, reflecting past glacial and more recent fluvial activity. The northern portion of the transect is today heavily farmed, with only scattered woodlots consisting mainly of deciduous species. In the central and southern portions, much of which is included in the Allegan State Game Area, conifers often predominate, with mixed hardwoods confined to shoreline habitats or forming small isolated stands intermingled with pines. The valley bottoms throughout this area are largely inaccessible due to the lack of floodplain development and presence of wetland vegetation. Marshes and swamps occupy extensive areas on valley floors along the course of the Kalamazoo River and its tributaries.

The area designated for intensive, systematic pedestrian survey constitutes 93 km², or the equivalent of one township. Its boundaries are purposefully irregular, reflecting our desire to include within the transect an area providing as much ecological diversity as possible, as well as a portion of the Rabbit River drainage on the north (Figure 2). Commencing at a point 3 km south of the dam at the west end of Lake Allegan, the transect extends in a northerly direction to a point 4 km north of the community of Hamilton on the Rabbit River, providing an overall length of about 19 km. East-west dimensions vary from less than 2 km to more than 8 km, with the average width of the transect being almost 5 km. Within this universe, inaccessible stream bottoms constitute 11 km² and the area potentially available for walk-over survey totals 82 km².

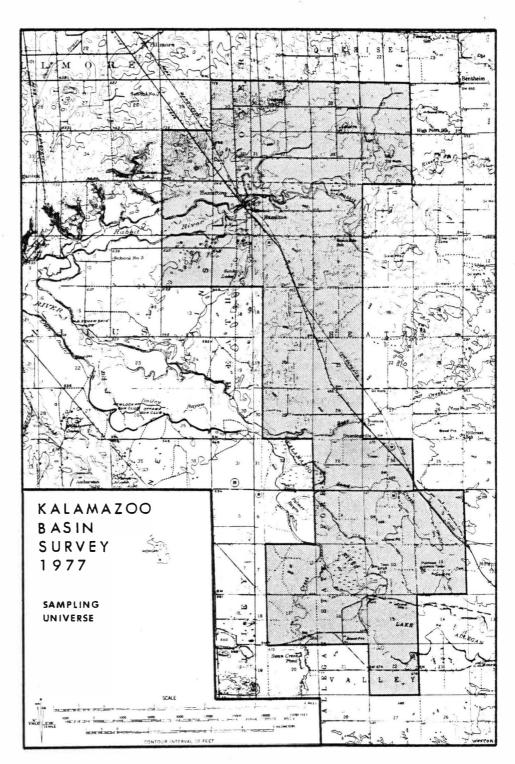


Figure 2

3. Previous Archaeological Research in the Project Area

Little prior field work has been undertaken in the project area. A search of the literature and site files in the Department of Anthropology revealed only 7 sites recorded for the transect, with an additional 6 sites located nearby (Figure 3). Of these 13 sites, only Allegan Dam (20 AE 56) had been previously tested. Exploratory excavations were carried out on the site by Garland in 1968. In 1977, the field school undertook additional testing as a means of confirming her impressions regarding the late prehistoric occupation of the site (Cremin 1977). The data recovered on these occasions are currently being studied by George Spero for inclusion in his M.A. Thesis.

Whenever possible, the survey team revisited sites known to exist within the project limits. For these, surveyors have reported no change in status, and WMU is not now contemplating any additional work at the sites.

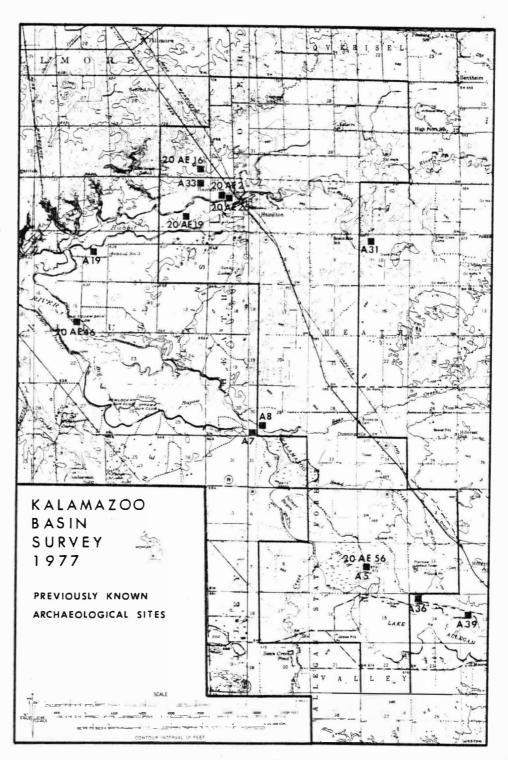


Figure 3

4. Site Survey Methodology

a. Research Design

To facilitate systematic investigation of this universe in the 6 weeks allotted, the $93~\mathrm{km}^2$ transect was stratified according to the distribution of soils plotted on a recent map of the basin prepared by the USDA-Soil Conservation Service (1974) and, secondarily, by rank ordering of streams. Soils within the project area are assigned to 3 associations:

Blount-Morley (1)

These are medium textured soils that lie on nearly level to gently sloping topography. They are developed in predominantly clay, clay loam and silty clay glacial till. The internal drainage of these soils ranges from well-drained to poorly drained, but they all have low permeability rates. Native vegetation consists principally of mixed hardwoods and oaks, with the potential productivity being low to medium for Blount and very high for Morley soils. This association is confined to the northern portion of the transect and constitutes 11.7 km² (12.6%) of the study area.

Oakville-Spinks-Oshtemo (3)

These coarse textured soils are widely distributed in the project area on nearly level to steep topography. They are developed in sand, sandy loam, stratified sand and loamy sand and stratified sand and gravel, occurring principally on old lake plains, outwash plains and morraines. They are well-drained soils with high permeability rates. Conifers, mixed hardwoods and oaks comprised the arboreal vegetation on these soils at the time of the original land surveys in 1831 and 1832. The former are now the most prevalent species. Woodland suitability information for these soils indicates only that the potential productivity for mixed hardwoods and oaks ranges from

low to medium. This association constitutes $59.4~\mathrm{km}^2$ (63.9%) of the transect.

Miami-Hillsdale (12)

Soils comprising this association are medium to coarse in texture and are found on rolling to steep topography. They are developed in glacial drift and till, ranging from sandy loam, loam and silt loam, to sandy clay loam. They are well-drained with medium permeability rates. These soils are favorable to the growth of mixed hardwoods and oaks, with the potential productivity being high to very high for hardwoods and high for oaks. Miami and Hillsdale soils constitute the remaining 21.9 km² (23.5%) of the project area.

Having delimited the distribution for all soil associations found within the transect, each was then subdivided further on the basis of whether or not permanent streams occurred and, if present, their rank order relative to one another. For those portions of a given association lacking permanent streams, the number of the soil association has been given to the sampling stratum. Areas of a soil association adjacent to streams are assigned 2 numbers; the first number reflecting the soil association and the second indicating the rank order of the proximal stream. For example, areas of soil association 3 (i.e. Oakville-Spinks-Oshtemo) bordering on the Kalamazoo River (a rank order 1 stream) are assigned to sampling stratum 3-1. For areas of soil association 3 bordering the Rabbit River (rank order 2), the assigned designation is stratum 3-2.

In aggregate, 6 sampling strata are recognized on the basis of the above criteria (Figure 4). These are (together with the proportion of the project area occupied by each):

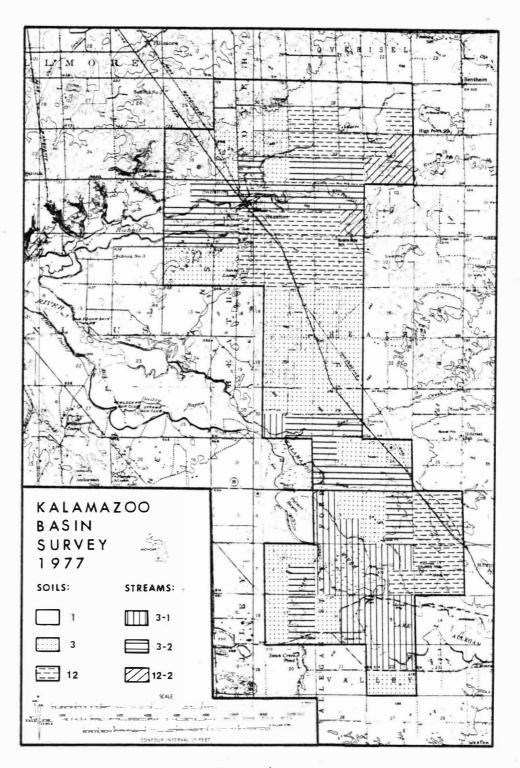


Figure 4

- Stratum 1: This stratum consists of areas of <u>Blount-Morley</u> soils which do not occur in close proximity to any permanent stream. It consititutes 11.7 km^2 (12.6%) of the project area.
- Stratum 3: Areas of Oakville-Spinks-Oshtemo soils which are not adjacent to any permanent streams. This stratum comprises 29.8 km^2 (32.0%) of the transect.
- Stratum 3-1: Areas of Oakville-Spinks-Oshtemo soils bordering on the Kalamazoo River. This stratum constitutes 12.3 km²

 (13.2%) of the area under study.
- Stratum 3-2: Same soil association as above, but with areas adjacent to tributaries of the Kalamazoo (e.g. Rabbit River, Swan Creek). It aggregates 17.5 km² (18.7%) of the transect.
- Stratum 12: This stratum consists of areas of Miami-Hillsdale soils which are not located adjacent to any permanent streams.

 It constitutes 19.3 km² (20.8%) of the project area.
- Stratum 12-2: This is the smallest sampling unit in the research area, aggregating a mere 2.4 km² (2.7%) of the transect. This stratum is composed of Miami-Hillsdale soils found east of Hamilton and adjacent to the Rabbit River.

Following Lovis (1976), the quarter-section (64.75 ha) was established as the unit by which the 6 strata would be sampled. First, a 40% simple random sample of all such units occurring within each stratum was generated. Of 144 quarter sections comprising the transect, 127 were judged to be at

least potentially accessible. Fifty-eight (45.7%) of these were then targeted for investigation by the 5-person survey team. In 22 field days the survey party visited 53 (91.3%) of the targeted units (Figure 5). Of almost 38 km² included within the 58 quarter-section sample, more than 14 km² (38%) were intensively surveyed, with coverage by stratum ranging between 31.9% and 44.6%, or 39.8% on the average. Table 1 summarizes surveyor coverage by stratum and random sampling unit. For our efforts we have realized an addition of 62 new sites to the list of 13 previously recorded for the transect and adjacent areas (Figure 6).

b. Field Procedures

The 5-person survey team systematically walked all accessible areas in the following manner. In situations where the modern land use pattern reflected predominantly agricultural activities and large fields were available for investigation, the team formed a line at one end of the area designated for survey with the individuals spaced at 25 m intervals. They then moved through the field following the furrows in a zig-zag fashion. Each person was instructed to first walk 10 paces at a 45° angle to the line of movement and then back 90°, or at an angle of 45° to the line of movement for 20 paces, but in the opposite direction. This movement of the team was maintained until everyone reached the far end of the field. After walking the length of the field in one direction, the team then shifted 25 m beyond the individual at the end of the line and repeated this pattern of movement, but in the opposite direction. The entire parcel of land was walked-over in this manner.

In restricted areas characterized by sand blow-outs and high banks

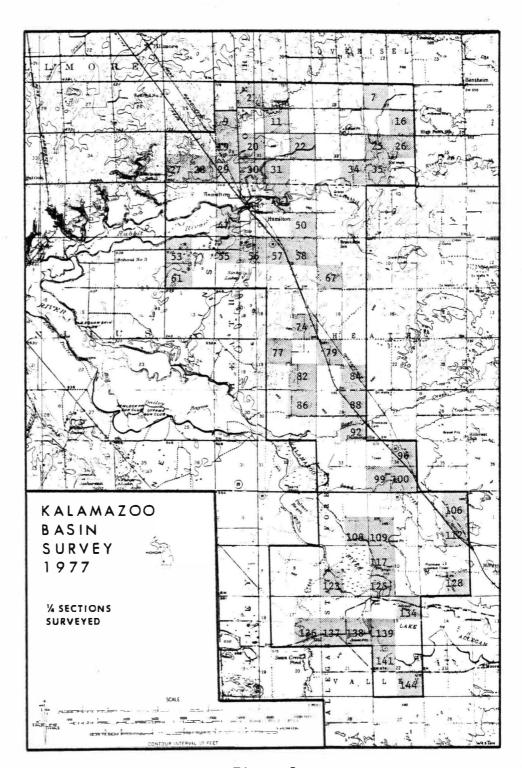


Figure 5

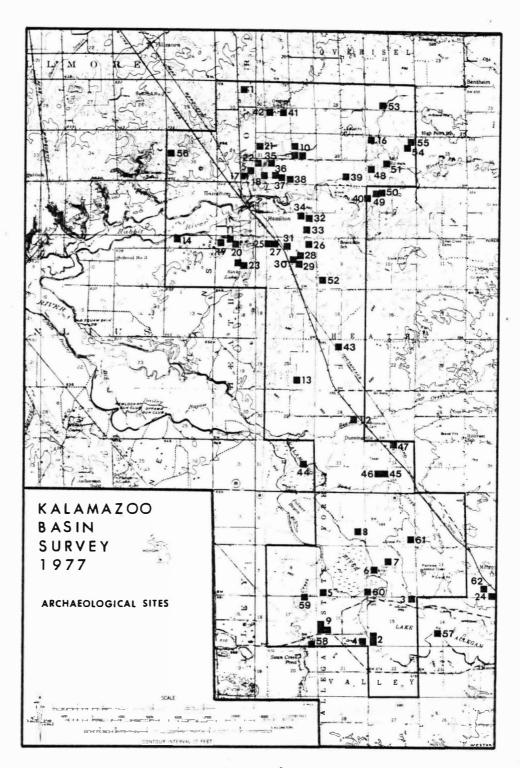


Figure 6

or ridges, the survey team scattered over the feature in order to evaluate visible areas. Here, systematic movement was not possible. In the event that an individual observed cultural scatter in a given locale, the team assembled in order to delineate the extent of the scatter and recover diagnostic material.

Following completion of each quarter-section, the team discussed salient aspects of their work and entries were made in the daily log. Such comments typically referenced the local topography and vegetation, sites observed, the nature of surface indicators of human activity and any problems which had arisen regarding surveyor coverage of the sampling unit. Information about ground visibility and the number of hectares covered in each unit was also noted. If a site(s) had been defined, a specially prepared form was filled out and a descriptive paragraph entered into the log along with other comments germaine to the team's work in the quarter-section. Informant sites were revisited whenever possible and private collections were examined and photographed.

c. Laboratory Procedures

Briefly, all artifactual materials collected during the survey were examined, cleaned and accessioned into the archaeological collections at WMU. Catalogue forms were prepared for each site, inventorying the contents of surface collection bags. Relevant data about each site were then entered on forms provided by the University of Michigan, and at this time local site numbers were changed to reflect the numbering system used by the State. Following completion of the appropriate forms, the catalogued materials were placed in the collections for future reference and study.

Table 1: Survey Coverage of Transect by Stratum and Random Sampling Unit (1/4 Section or 64.75 ha)

Stratum 1:	N= 18 (7 targeted)	Objective-453.25 ha
RS#	Coverage	
2 9 28 7 27 5	44.5 46.5 34.4 20.2 56.7 202.3 ha	Achieved-44.6%
Stratum 3:	N= 46 (18 targeted)	Objective-1165.50 ha
<u>RS#</u>	Coverage	
19 84 31 11 82 137 109 86 88 96 61 79 74 77 29 144 20 17	16.2 6.1 60.7 52.6 16.2 24.3 10.1 20.2 24.3 24.3 16.2 8.1 12.1 4.0 36.4 8.1 32.4	Achieved-31.9%
Stratum 3-1:	N=19 (8 targeted)	Objective-518.00 ha
RS#	Coverage	
108 117 138 134 141 123 125 139	44.5 50.6 50.6 28.3 24.3 8.1 0.8 16.2	Achieved-43.1%

Table 1, continued

Stratum 3-2:	N= 27 (11 targeted)	Objective-712.25 ha
RS#	Coverage	
53	16.2	
92	32.4	
47	10.1	
34	48.6	
136	16.2	
41	30.4	
55	24.3	
99	24.3	
100	16.2	
30	60.7	
10	279.4 ha	Achieved-39.2%
		- #0
Stratum 12:	N= 30 (12 targeted)	Objective-777.00 ha
RS#	Coverage	
58	36.4	
67	40.5	
112	16.2	
22	36.4	
57	16.2	
50	64.8	
128	48.6	
16	16.2	
106	16.2	
56	2.0	
25	0.8	
11	294.3 ha	Achieved-37.9%
11	294.3 Ha	Achieved-57.7%
Stratum 12-2:	N= 4 (2 targeted)	Objective-129.50 ha
RS#	Coverage	
3.6	24.3	
26		
35 2	30.4	. 1
2	54.7 ha	Achieved-42.2%

Table 1, continued

Totals:

Sampling Universe	144 quarter sections (127 units accessible)
Targeted Units	58 quarter sections (3755.50 ha)
Surveyed Units	53 quarter sections,
	with coverage of 1426.40 ha (38%)

Summary by Stratum

Stratum 1:	5	quarter	sections	/202.3	ha	(44.6%)
Stratum 3:	17	quarter	sections	/372.3	ha	(31.9%)
Stratum 3-1:	8	quarter	sections	/223.4	ha	(43.1%)
Stratum 3-2:	10	quarter	sections	/279.4	ha	(39.2%)
Stratum 12:	11	quarter	sections	/294.3	ha	(37.9%)
Stratum 12-2:	2	quarter	sections	/ 54.7	ha	(42.2%)

Average coverage for 6 sampling strata= 39.8% of accessible land in sample from each stratum.

5. Description of Sites Recorded

With respect to the following brief site descriptions, an assessment is made concerning each site's relative significance. That is, a "low, moderate, or high priority" designation is assigned to each site regarding its potential interpretive value to Western Michigan University's current research goals which are: 1) building a cultural chronology and 2) delineating prehistoric man-land relationships in the Kalamazoo River Valley.

- KBS-77-1 Beltman. Small campsite in the NW½ of the NE½ of Section 30, 20 AE 137 Overisel Township, T4N R14W, Allegan County, Michigan. Light surface scatter over an area 15 m² on a small peninsula of land extending into a former small swamp land. Low priority.
- KBS-77-2 Neandercutt Pointe. Campsite in the SW½, Sec. 15, and N½, 20 AE 138 NW½, Sec. 22, Valley Twp., T2N R14W, Allegan Co., MI. About 500 m² of cultural debris on the west end of Lk. Allegan (as recently formed by the Consumers Power Co. dam). Moderate priority.
- KBS-77-3 Steffans. Small campsite chipping station in the NE $\frac{1}{4}$ of 20 AE 139 the NE $\frac{1}{4}$ of Sec. 15, Valley Twp., T2N R14W, Allegan Co., MI. About 900 m² of cultural debris no more than 300 m N. of Lake Allegan (as recently formed by the Consumers Power Co. dam). This site is associated with 20 AE 88 about 250 m to the E. Low to moderate priority.
- KBS-77-4 Lakeview. Isolated scraper and light flint chippage find. 20 AE 140 This is largely an undetermined type site in need of subsurface investigation for better evaluation. Located in the S^1_{2} , SE^1_{4} , Sec. 16, Valley Twp., T2N R14W, Allegan Co., MI. Low priority.
- KBS-77-5 Koopman. Extensive campsite in the SW^1_4 , SW^1_4 , Sec. 9, Valley 20 AE 141 Twp., T2N R14W, Allegan Co., MI. About 23,000 m² of cultural debris on an E-W ridge of sand on the D.N.R. Swan Creek Wildlife area. A 17 cm midden was found on the E. side of the site. Moderate to high priority.
- KBS-77-6 Lake Allegan. Large campsite area in the SW½, NW½, Sec. 10, 20 AE 198 Valley Twp., T2N R14W, Allegan Co., MI. About 46,000 m² of cultural debris along the E. bank above the Kalamazoo River about 280 m N.N.E. of the Allegan Dam Site (20 AE 56). Moderate priority.
- KBS-77-7 Harath. Large campsite area or possible village in the E^{1}_{2} , 20 AE 142 NW $^{1}_{4}$, Sec. 10, and in the W $^{1}_{2}$, NW $^{1}_{4}$, Sec. 10, Valley Twp., T2N R14W, Allegan Co., MI. About 70,000 m 2 of cultural debris in sand blow out and along a series of sand ridges running E -W. Moderate to high priority.

- KBS-77-8 Recla. Large campsite in the SE^1_4 , Sec. 4, Valley Twp., 20 AE 143 T2N R14W, Allegan Co., MI. About 70,000 m² of cultural debris on the N. bank and inland area of the Swan Creek (Koopman) marsh. Several sand blow-outs in open plains area also produced cultural debris. Moderate to high priority.
- Swan Creek Dam. Large campsite area in the NW¹4, SW¹4, Sec. 6, Valley Twp., T2N R14W, Allegan Co., MI. About 70,000 m² of cultural debris are generally scattered over the SW portion of this area. Moderate priority.
- Pol. Campsite in the SW¼, SW¼, Sec. 32, Overisel Twp., T4N R14W, Allegan Co., MI. Intermittent cultural debris found along a low sandy ridge near a tributary stream of the Rabbit River. Moderate to low priority.
- KBS-77-11 Bussies. Large campsite or village in the middle of the N^{1}_{2} , NW^{1}_{4} , Sec. 7, Heath Twp., T3N R14W, Allegan Co., MI. About 4,000 m² of cultural debris on a prominent (possible old) beach running NE-SW. The Bower Site (20 AE 154) is located to the W and the Chicken Farm site (20 AE 155) to the E of this site. Moderate to high priority.
- KBS-77-12 Dunningville. Chipping station in the E^{1}_{2} , NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 20 AE 147 28, Heath Twp., T3N R14W, Allegan Co., MI. About 230 m² of cultural debris (primarily chippage) on a sandy ridge N of Bear Creek. Low priority.
- KBS-77-13 Slotman. Small campsite in the SW½, Sec. 20, Heath Twp., 20 AE 148 T3N R14W, Allegan Co., MI. Isolated projectile point and flint chip find on a sand ridge in the NE corner of a pine tree planting area. Low priority.
- KBS-77-14
 Bataglia. Possible village site in the NE¼, NW¼, Sec. 12,
 20 AE 149
 Manlius Twp., T2N R15W, Allegan Co., MI. About 9,300 m²
 of cultural debris ranging from uniface scrapers to bifacially
 worked tools and projectile points on the S. sand bank of the
 Kalamazoo River in what is now a flower nursery. This site
 is one of the most intensive and extensive that was recorded
 on this survey. High priority.
- KBS-77-15 Hamilton Bayou. Possible village or campsite in the middle of the SE½, Sec. 31, Overisel Twp., T4N R14W, Allegan Co., MI. This is an extensively occupied site of about 8,000 m² of cultural debris ranging from finished tools to flint chippage on the N. rim or end of the Hamilton Bayou (Rabbit River). High to moderate priority.
- KBS-77-16 Tucker. Campsite in the NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 34, Overisel Twp., 20 AE 151 T4N R14W, Allegan Co., MI. About 11,500 m² of cultural debris on a terrace next to the W. side of the Rabbit River. Low to moderate priority.

- KBS-77-17 Nyboer. Probably campsite in the SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 31, 20 AE 152 Overisel Twp., T4N R14W, Allegan Co., MI. About 230 m 2 of cultural debris on the NW bank of the Hamilton Bayou (Rabbit River). Low priority.
- KBS-77-18
 Berens. Campsite in the SE½, SE½, Sec. 31, Overisel Twp.,
 20 AE 153
 T4N R14W and the NE½ of the NE½ of Sec. 6, Heath Twp.,
 T3N R14W, Allegan Co., MI. About 11,000 m² of cultural debris on a spit of land that extends into the Hamilton Bayou (Rabbit River). Low to moderate priority.
- KBS-77-19 Bower. Possible campsite or village in the W_2^1 of the N_2^1 , 20 AE 154 NW_3^1 of Sec. 7, Heath Twp., T3N R14W, Allegan Co., MI. About 10,500 m² of cultural debris SE of the Rabbit River and just W of a two-track access road. Moderate priority.
- KBS-77-20 Chicken Farm. Campsite in the E^1_2 , N^1_2 , NW^1_4 , Sec. 7, Heath 20 AE 155 Twp., T3N R14W, Allegan Co., MI. About 230 m² of lightly scattered cultural debris on the edge of a small kettle depression W of 47th St. Moderate to low priority.
- Vanderkolk. Small campsite or chipping station in the E_2^1 , 20 AE 156 NE $_2^1$ 4, Sec. 31, Overisel Twp., T4N R14W, Allegan Co., MI. About 1,400 m² of lightly scattered cultural debris on a low ridge that runs EW just NW of the corner of 46th St. and 137th Ave. Low priority.
- KBS-77-22 Schutte. Small campsite in the E^1_{2} , SE^1_{4} , Sec. 31, Overisel 20 AE 157 Twp., T4N R14W, Allegan Co., MI. About 930 m² of very lightly scattered cultural debris in a low depression just W of a tributary stream of the Rabbit River. Low priority.
- KBS-77-23 Sink Lake. Campsite or possible village in the middle of 20 AE 158 Sec. 7, Heath Twp., T3N R14W, Allegan Co., MI. About 8,000 m² of relatively heavily scattered cultural debris on the W edge of Sink Lake on both sides of 47th St. Moderate priority.
- KBS-77-24 Hiscock. Possible village in the SE^1_4 , SW^1_4 , Sec. 12 and the 20 AE 159 N^1_2 , N^1_2 , Sec. 13, Valley Twp., T2N R14W, Allegan Co., MI. Personal collection in the hands of Mr. Hiscock taken from an area of sand blow outs on a sand knoll 400 m W of M40 situated in gently rolling terrain. A surface collection was also taken from this area by a WMU field party and photographs were made of Mr. Hiscock's projectile point collection. High to moderate priority.
- KBS-77-25 Eding. Small chipping station in the NW_4 , Sec. 8, Heath Twp., 20 AE 160 T3N R14W, Allegan Co., MI. About 1,150 m² of very lightly scattered cultural debris on a sand ridge on the N side of a low depression bordering dark organic bottom lands. Low priority.

- KBS-77-26 Jasper. Possible small campsite with a fairly isolated 20 AE 161 projectile point found in the NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 8, Heath Twp., T3N R14W, Allegan Co., MI. About 14,000 m² of very lightly scattered cultural debris on a ridge overlooking dark organic bottom lands to the S. Low priority.
- KBS-77-27 Lolli-Pup. Chipping station in the middle of the NW½,
 20 AE 162 Sec. 8, Heath Twp., T3N R14W, Allegan Co., MI. About 930
 m² of cultural debris on a sand ridge on the N. side of a low depression, probably a former lake bottom. Low to moderate priority.
- KBS-77-28 Hamilton. Village site in the SW_4 , NE_6 , Sec. 8, Heath Twp., 20 AE 163 T3N R14W, Allegan Co., MI. About 18,000 m² of cultural debris on a large N-S sand and clay ridge above a former lake. High priority.
- KBS-77-29 Kempkers. Campsite in the SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 8, Heath Twp., 20 AE 164 T3N R14W, Allegan Co., MI. About 3,700 m 2 of cultural debris on a knoll lying just above a former shallow lake. Moderate to high priority.
- KBS-77-30 Mud Ridge. Campsite in the $SW^{\frac{1}{2}}$, $NE^{\frac{1}{2}}$, Sec. 8, Heath Twp., 20 AE 165 T3N R14W, Allegan Co., MI. About 900 m² of cultural debris located on a small peninsula of land extending into a former shallow lake. Moderate priority.
- KBS-77-31 Julius. Possible campsite in the SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 8, Heath 20 AE 166 Twp., T3N R14W, Allegan Co., MI. About 230 m 2 of light cultural scatter on a small sand rise overlooking a former shallow lake to the north. Low to moderate priority.
- KBS-77-32 Sandy Ridge A. Isolated projectile point found in the NE½, 20 AE 167 SE½, Sec. 5, Heath Twp., T3N R14W, Allegan Co., MI. Point was found on a high sand ridge a half mile south of the Rabbit River. Low priority.
- KBS-77-33 Sandy Ridge B. Isolated projectile point found in the middle of the SE 1 4, Sec. 5, Heath Twp., T3N R14W, Allegan Co., MI. Point found below a high knoll on a small peninsula of land extending into a former marsh. Low priority.
- KBS-77-34 Spring Brook. Isolated projectile point found in the N_2^1 , 20 AE 169 NW_4^1 , SE_4^1 , Sec. 5, Heath Twp., T3N R14W, Allegan Co., MI. Point found on flat lands a half mile S of the Rabbit River. Low priority.
- KBS-77-35 Tributary A. Chipping station in the NW½, SW½, Sec. 32, Overisel Twp., T4N R14W, Allegan Co., MI. About 900 m² of cultural debris found on the east side of a small tributary creek which runs a half mile south to the Rabbit River. Low priority.

- Tributary B. Chipping station in the NW corner of the SW4, 20 AE 171

 SW4, Sec. 32, Overisel Twp., T4N R14W, Allegan Co., MI. About 225 m² of cultural debris found on the east side of a small tributary creek which runs one quarter mile south to the Rabbit River. Low priority.
- KBS-77-37 Berens Point. Small chipping station in the N center part of 20 AE 172 the SW½, SW½, Sec. 32, Overisel Twp., T4N R14W, Allegan Co., MI. Light cultural debris NE of the junction of a small tributary creek and the Rabbit River. Low priority.
- KBS-77-38 Klingenburg. Chipping station in the SE½, SW½, Sec. 32, 20 AE 173 Overisel Twp., T4N R14W, Allegan Co., MI. About 225 m² of light cultural scatter in a road cut one quarter mile north of the Rabbit River. Low priority. New house construction in immediate area.
- KBS-77-39 Schotten. Campsite and possible chipping area in the SW½, SE½, 20 AE 174 Sec. 33, Overisel Twp., T4N R14W, Allegan Co., MI. About 225 m² of cultural debris on the edge of a wooded river floodplain, a quarter mile N of the Rabbit River. A reported historic Indian campsite. Moderate priority.
- KBS-77-40 Emerson. Possible campsite in the NW 1 , Sec. 3, Heath Twp., 20 AE 175 T3N R14W, Allegan Co., MI. About 900 m 2 of cultural debris on the N side of the Rabbit River and the S end of 42nd street. Low to moderate priority.
- KBS-77-41 Rigterink. Possible Archaic campsite in the NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 20 AE 176 29, Overisel Twp., T4N R14W, Allegan Co., MI. About 225 m 2 of cultural scatter on a high morainic knoll overlooking the Rabbit River basin to the south. Low to moderate priority.
- KBS-77-42 Albers. Small chipping station in the N_2 , NW_4 , SW_4 , Sec. 20 AE 177 29, Overisel Twp., T4N R14W, Allegan Co., MI. About 5,000 m² of light scatter on a high morainic knoll overlooking the Rabbit River basin to the south. Low priority.
- KBS-77-43 C. & O. Blowout. Small chipping station in the NE $\frac{1}{4}$, NW $\frac{1}{4}$, 20 AE 178 Sec. 21, Heath Twp., T3N R14W, Allegan Co., MI. About 225 m 2 of cultural debris in a sand blowout area on a low sand ridge just east of the former C. & O. railroad grade. Low priority.
- Palmer Bayou. Woodland campsite in the middle of Sec. 32, Heath Twp., T3N R14W, Allegan Co., MI. About 7,000 m² of cultural debris on the top of a sandy bluff area overlooking the Kalamazoo River to the south in the Allegan State Forest. Moderate priority.
- KBS-77-45 Nevenzel. Possible campsite in the NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 34, 20 AE 180 Heath Twp., T3N R14W, Allegan Co., MI. About 15,000 m 2 of cultural debris within sand blowout areas on the top of a prominent ridge in an open plains. Low to moderate priority.

- Vanvoord. Campsite in the NE½, SW½, Sec. 34, Heath Twp., 20 AE 181

 T3N R14W, Allegan Co., MI. About 225 m² of cultural debris and two in situ exposed firepits on the top of a low sand ridge in an open plains area just west of site KBS-77-45. Moderate priority.
- KBS-77-47 Towers. Isolated projectile point found in the NW¹4, NE¹4, 20 SE 182 Sec. 34, Heath Twp., T3N R14W, Allegan Co., MI. Triangular point found on a subtle sand rise behind and E of houses next to woods. Low priority.
- KBS-77-48 Jerome. Small campsite in the NW^{1}_{4} , SW^{1}_{4} , Sec. 34, Overisel 20 AE 183 Twp., T4N R14W, Allegan Co., MI. About 1400 m² of cultural debris and firepits exposed by the plow on the west bank of the wooded floodplain of the Rabbit River. Moderate priority.
- KBS-77-49 Schaap. Possible village site in the N_2 , NW_4 , Sec. 3, Heath 20 AE 184 Twp., T3N R14W, Allegan Co., MI. About 8,000 m² of debris found on a peninsula of land sloping down and E into an "almost oxbow" bend in the Rabbit River. Moderate to high priority.
- KBS-77-50 Schaap Firepits. Firepits in the W_2 , NW_4 , Sec. 3, Heath Twp., 20 AE 185 T3N R14W, Allegan Co., MI. Several 1 meter wide by .5 meter deep depressional pits with numerous firecracked rocks on a well defined terrace on the W side of the Rabbit River. High priority.
- KBS-77-51 Schaap Mound. Mound in the NE¹₄, SW¹₄, Sec. 34, Overisel Twp., 20 AE 186 T4N R14W, Allegan Co., MI. An oblong mound about 4 meters high and 10 meters long, isolated in the W floodplain of the Rabbit River. High priority.
- KBS-77-52 Jerry. Chipping station in the SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 9, Heath Twp., 20 AE 187 T3N R14W, Allegan Co., MI. Cultural debris in an area about 225 m 2 on a small sandy rise on the N. edge of a minor swamp. Low priority.
- KBS-77-53 Austin. Small chipping area in the SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 27, Overisel 20 AE 188 Twp., T4N R14W, Allegan Co., MI. Cultural debris found in an area about 225 m 2 on a small ridge on the W. bank of a small ravine flowing one mile S. to the Rabbit River. Low priority.
- KBS-77-54 Lundy Pointe. Campsite in the E½, NE¼, Sec. 34, Overisel Twp., 20 AE 189 T4N R14W, Allegan Co., MI. Campsite and possible chipping debris in an area about 225 m2 on a prominent and high point of land overlooking the wooded floodplains of the Rabbit River to the south. Moderate priority.
- KBS-77-55 High Point. Possible campsite in the NE corner of the NE 1 ₄, 20 AE 190 Sec. 34, Overisel Twp., T4N R14W, Allegan Co., MI. Light scatter about 225 m² found in a low relief area one half mile N. of the Rabbit River. Low to moderate priority.

- KBS-77-56 Lohman. Isolated projectile point found in the NW_4^1 , NW_4^1 , SW_4^1 , Sec. 36, Fillmore Twp., T4N R15W, Allegan Co., MI. About 230 m² of questionable flint chippage and fire cracked rock associated with this projectile point on a high moraine. Low priority.
- KBS-77-57 Indian Shores. Small chipping station in the S½, Sec. 14, 20 AE 192 Valley Twp., T2N R14W, Allegan Co., MI. A slight scatter of flint chippage and fire cracked rock near the most northernly point of land jutting into Lake Allegan from the S in an area of resort home development. Low priority.
- KBS-77-58 Pine Point. Small campsite in the SE 1 4, SE 1 4, Sec. 17, Valley 20 AE 193 Twp., T2N R14W, Allegan Co., MI. About 230 m 2 of light flint chippage scatter on the NE banks above the Swan Creek Pond. Low priority.
- KBS-77-59 Campground #6. Small campsite in the S½, SE¼, Sec. 8, Valley Twp., T2N R14W, Allegan Co., MI. About 3,100 m² of light flint chippage scatter and fire cracked rock in DNR campgrounds on the W bank of Swan Creek. Low priority.
- KBS-77-60 Elam. Large campsite or village in the SW½, SW½, Sec. 10, 20 AE 195 Valley Twp., T2N R14W, Allegan Co., MI. About 8,300 m² of Late Woodland cultural debris ranging from ceramic sherds to projectile points on a floodplain terrace along the S side of the Kalamazoo River across from 20 AE 56 ½ mi. to the N. Excavation of this site was conducted during the Spring of 1978 by WMU's archaeological field school. High priority.
- KBS-77-61 Sand Creek. Campsite in the SE¹/₄, SE¹/₄, Sec. 3, Valley Twp., T2N R14W, Allegan Co., MI. A private collection of projectile points by Mr. Clarence Hiscock and a light scatter of flint chippage that was surface collected by a WMU survey field party from a ridge above Sand Creek now covered with pine trees. Photographs were taken of Mr. Hiscock's possible Late Archaic to Late Woodland projectile point collection. Moderate priority.
- Millgrove. Campsite in the S½, SE¼, SW¼, Sec. 12, Valley
 Twp., T2N R14W, Allegan Co., MI. Area of Late Archaic to
 Late Woodland cultural debris in an old vineyard on a grassed
 over rolling moraine. A private collection of projectile
 points by Mr. Clarence Hiscock was photographed and a surface
 collection was made by a WMU field survey party. Moderate
 priority.

6. Tentative Interpretations and Conclusions

The 62 sites described in the preceding section are difficult to summarize and interpret. With rare exception, surface collections yielded only small quantities of cultural debris and few diagnostic items. On the basis of data currently available to us it is apparent that the prehistoric occupation of the project area spans the Archaic and Woodland periods. No sites evidence utilization by Paleo-Indian hunters of the Terminal Pleistocene.

The overwhelming majority of sites discovered by the survey team appear to represent extensive rather than intensive use of the research universe. Most prevalent are those sites represented by "spot" finds of projectile points and/or scrapers, with or without associated lithic debitage. We believe such sites to reflect episodes of hunting and/or knapping activity characteristic of small mobile populations exploiting the faunal resources of the area, probably on a seasonal basis. While several of these small sites should be investigated in order that we might more precisely delineate their function, at this time they warrant no more than "low priority" status.

On the other hand, we have identified several components which clearly are deserving of systematic study in the near future. This is particularly true for sites such as Bataglia (20 AE 149), Hamilton (20 AE 163), Schaap Mound (20 AE 186) and the Elam site (20 AE 195). Currently, the WMU archaeological field school is testing the Elam site and, as anticipated, the results of excavation to date indicate that this was the locus of intensive occupation by Upper Mississippian peoples between perhaps A.D. 1200-1500. The kinds and quantities of cultural debris recovered during survey

indicated that subsurface testing of this site would prove most profitable. It can now be said that the density of all classes of debris and also cultural features is very high at Elam. And data recovered from this site, together with materials previously excavated by WMU field schools from the nearby Allegan Dam (20 AE 56) and Schwerdt (20 AE 127) sites, should ultimately enable us to make some meaningful statements about the late prehistoric occupation of the lower valley.

Although we can offer but little interpretation of our survey data at the present time, we suspect that the following observations on site distribution and intensity of occupation may ultimately prove valuable for explaining prehistoric land use patterns in the universe of this study and beyond.

Sixty-three archaeological sites, both previously known and newly recorded, occur within the surveyed portions of the 1977 transect, resulting in an average site density of one site per 23 hectares investigated. Site density by sampling stratum is as follows: Stratum 1- 4; Stratum 3- 11; Stratum 3-1- 11; Stratum 3-2- 19; Stratum 12- 14; and Stratum 12-2- 4. When strata are considered one at a time, we observe that the density of sites ranges between less than ½ and almost twice the average recorded for the entire sampling universe. Site density is observed to be lowest in areas which are removed from permanent streams and where low to moderately productive soils (with respect to the development of mixed hardwood and oak forest cover) occur. Conversely, where moderate to highly productive soils differ only with respect to drainage, sites are found to occur along the Kalamazoo River with a frequency approaching the average, whereas the frequency of occurrence adjacent to major tributaries like the Rabbit

River and Swan Creek is almost twice as high. Inasmuch as these comparisons are based not on the extent of land or number of sampling units existing within the various strata, but rather on the amount of ground actually walked by the surveyors, sampling bias should not be a factor. Rather, these data would appear to indicate a marked riverine orientation for prehistoric sites, with the preferred locations for occupancy being the tributary valleys.

Somewhat different results are obtained if we evaluate our distributional data using the following scale as a measure of the aboriginal intensity of occupation (Christopher Peebles, personal communication):

01: spot find = 1 point

02: lithic scatter = 5 points

03: component = 10 points

Assigning these values to 56 of 63 sites (i.e. those sites recorded during the project) occurring within the surveyed portions of the transect, a mean intensity score of 5.63 is obtained. By sampling stratum the scores recorded are as follows: Stratum 1- 3.67; Stratum 3- 4.37; Stratum 3-1- 8.33; Stratum 3-2- 5.73; Stratum 12- 4.64; and Stratum 12-2- 7.50. These figures, when compared with the previous data set, also illustrate a preference for locating settlements in close proximity to perennial streams, but with main habitation areas occurring most frequently along the Kalamazoo (Stratum 3-1) and, secondarily, on the Rabbit River upstream from Hamilton (Stratum 12-2). Limited activity or special purpose sites (e.g. temporary hunting camps, chipping stations) occur at some distance from main habitation sites, being scattered throughout the "hinterlands".

Our observations, although based on a small and inadequate data set, at least tentatively suggest a pattern of prehistoric settlement in the

project area consisting of seasonal or multi-seasonal base camps and ancillary limited activity sites. And while this pattern may persist through time, only an extensive program of test excavation will elucidate more specific aspects of the subsistence-settlement system characterizing the various archaeological cultures of this area.

7. Recommendations for Future Resource Development and Management

Most of the sites recorded during this survey were found in fields under cultivation and erosional features (e.g. sand blow-outs). Therefore, the context within which the archaeological data occur is constantly undergoing alteration and essential information is being irretrievably lost. However, in light of present land use patterns in the area it is also unlikely that the pace of destruction will accelerate in the near future. This is especially true with respect to those sites occurring in the Allegan State Game Area. Since this large parcel of land is no longer in private ownership, sites located here are reasonably safe, with the possible exception of occasional acts of vandalism.

With little data in hand, it is quite impossible to make recommendations for the management and preservation of the sites reported herein. Several of the sites given "high priority" status by us will ultimately be tested as part of the archaeological program sponsored by WMU in the Kalamazoo River Basin. As more information accumulates through the systematic testing of these sites, recommendations pertaining to their development and management will be forthcoming.

References Cited

Baldwin (Garland), Elizabeth

1976. Inventory of Prehistoric Sites, Kalamazoo-Black-Macatawa-Paw Paw Rivers Basin. Technical Paper No. 7, United States Department of Agriculture. Lansing.

Cremin, William M.

1977. A Report on the 1977 Test Excavations at the Allegan Dam Site (20 AE 56), Allegan County, Michigan. Report submitted to the Michigan History Division, Michigan Department of State. Lansing.

Lovis, William

1976. Quarter Sections and Forests: An Example of Probability Sampling in the Eastern Woodlands. American Antiquity, 14(3): 364-372.

USDA-Soil Conservation Service

1974. General Soil Map of the Kalamazoo-Black-Macatawa-Paw Paw Rivers Basin. United States Department of Agriculture. Lansing.

Appendix I: Catalog of Surface Collection from 62 Sites

Site Beltman KBS-77-1/20 AE 137	Classifier
Square Surface Survey	Today's Date <u>5/17/77</u>
Level or Feature	Date Material Collected5/9/77
Chipped Stone	Ground Stone
Biface (describe)1	Celt
Tip Uniface (describe)	Grooved Ax
Scraper	Adz
Drill	Mortar
Core1	Pestle
Other (specify)6 Non-utilized flakes	Rubbing Stone
Utilized Flakes	Other (specify)
Weight	
Bone	Shell Yes
Fragments4	Mollusc
Artifacts (specify)	Turtle
Pottery	
1	
Rim sherds	Body sherds 6
Clay pipe	
Other (specify) Brick	

Site KBS-77-2 /20 AE 138		Classifier Robert Hutton	
Square Surface Collection		Today's Date _ 5/17/77	
Level or Feature		Date Material Collected5/11/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
ile:	1	Grooved Ax	
Uniface (describe)	1	Adz	
Drill		Mortar	-
Core	4	Pestle	
Other (specify) non-utilized flakes	82	Rubbing Stone	
Utilized Flakes	1.	Other (specify)	-
Weight			
Bone		<u>Shell</u>	
Fragments		Mollusc	1
Artifacts (specify)		Turtle	
Pottery			
		Poder chande	2
Rim sherds		Body sherds	
Clay pipe			, :-
Other (specify)			

Site Steffans KBS-77-3/20 AE 13	39	Classifier Robert Hutton	
Square _Surface Collection		Today's Date	
Level or Feature	-	Date Material Collected 5/11/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)	ii.	Grooved Ax	
Unitace (describe)		Adz	
Drill		Mortar	
Core		Pestle	1
Other (specify) unutilized flakes	10	Rubbing Stone	
Utilized Flakes	3*	Other (specify)	
Weight -			
Bone		Shell	
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	11
Clay pipe			
Other (specify)			

Site <u>Lakeview KBS-77-4/20 AE</u>	140	Classifier	
Square <u>Surface Collection</u>		Today's Date	
Level or Feature		Date Material Collected5/12/77	
Chipped Stone		Ground Stone	
Biface (describe)	S	Celt	
		Grooved Ax	
Uniface (describe) Scraper Awl		Adz	
Drill	5	Mortar	
Core		Pestle	
Other (specify) Chippage	6	Rubbing Stone	
Utilized Flakes	• •	Other (specify)	:
Weight			W
Bone		<u>Shell</u>	
Fragments	1	Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	1
Clay pipe			
Other (specify)			The second

Square Surface Collection Today's Date 5/20/77 Level or Date Material Collected 5/12/77 Chipped Stone Ground Stone	
Feature Collected5/12/77	
Chipped Stone Ground Stone	
Biface (describe)1 Celt	
Grooved Ax Uniface (describe)	_
Adz	
Drill Mortar	
Core5 Pestle	
Other (specify) 65 Rubbing Stone	
Utilized Flakes	
Weight	
Bone Shell	
Fragments Mollusc	
Artifacts (specify) Turtle	
Pottery	
Rim sherds Body sherds	
Clay pipe	-
Other (specify)	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Historic Artifacts

2 pieces glass

2 F.C.R.

- 1 round nail
- 1 historic pottery rim
- 2 pieces historic porcelin
- 1 piece shoe leather
- 2 historic sherds

SiteLake Allegan KBS-77-6/20 AE 198	Classifier Robert Hutton
Square _Surface Collection	Today's Date
Level or Feature	Date Material Collected5/13/77
Chipped Stone	Ground Stone
Biface (describe) 4	Celt
projectile points Uniface (describe) 2	Grooved Ax
	Adz
Drill	Mortar
Core	Pestle
Other (specify) 1 utilized flake	Rubbing Stone
Utilized Flakes4	Other (specify)
Weight	
Bone	<u>Shell</u>
Fragments	Mollusc
Artifacts (specify)	Turtle
Pottery	
Rim sherds1	Body sherds 4
Clay pipe	
Other (specify)	P.

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 broken frame of pair of glasses

SiteHarath KBS-77-7/20 AE 14	2	ClassifierJon Leader	
Square _Surface Collection_		Today's Date5/17/77	
Level or Feature		Date Material Collected5/13/77	
Chipped Stone		Ground Stone	
Biface (describe) base of arrowhead		Celt	-
Uniface (describe)	3	Grooved Ax	
Unitade (describe)		Adz	
Drill		Mortar	
Core	1	Pestle	
Other (specify) non utilized chippage	100	Rubbing Stone	
Utilized Flakes		Other (specify)	***************************************
Weight			
Bone		Shell.	
Fragments		Mollusc	
Artifacts (specify)	-	Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe		2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 181
Other (specify)		ÿ.	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

A.) Fire cracked stone 3

Site <u>Recla KBS-77-8/20 AE 143</u>		Classifier _Jon Leader	
SquareSurface Collection		Today's Date5/17/77	
Level or Feature		Date Material Collected 5/13/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)		Grooved Ax	
Drill .		Mortar	
Core		Pestle	
Other (specify) non-utilized chippage	_56	Rubbing Stone	
Utilized Flakes		Other (specify)	***************************************
Weight			
Bone		Shell .	
Fragments	1	Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds	1	Body sherds	P
Clay pipe	(a Y	
Other (specify)			
Remarks: Note presence of charc	oal, fire-crac	ked rock, etc.	
1. Fire cracked stone	2		

1

1

2. .38 cal. bullet wad cutter3. .22 cal. long rifle bullet

4. glass

Swan Creek Dam

Site KBS-77-9 /20 AE 144		Classifier _Joyce Tressler	
SquareSurface Collection		Today's Date5/24/77	
Level or Feature		Date Material Collected5/16/77	
Chipped Stone		Ground Stone	
Biface (describe) triangular point	_1	Celt	
		Grooved Ax	
Uniface (describe)	:	Adz	5
Drill		Mortar	-
Core	_1	Pestle	
Other (specify) chips & flakes		Rubbing Stone	***************************************
Utilized Flakes	2 .	Other (specify)	-
Weight	y		
Bone small tubular 4, round 1		<u>Shell</u>	
Fragments	5 total	Mollusc	
Artifacts (specify)	-	Turtle	
Pottery			29
Rim sherds		Body sherds	
Clay pipe	****		
Other (specify)			

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Historic ceramics 2 pieces

Site Pol KBS-77-10/20 AE 145		Classifier Robert Hutton			
SquareSurface collection	_	Today's Date5/24/77			
Level or Feature		Date Material Collected 5/18/77			
Chipped Stone		Ground Stone			
Biface (describe) projectile point	2	Celt			
scraper	2	Grooved Ax			
Uniface (describe)	3	Adz	(
Drill	x	Mortar			
Core		Pestle			
Other (specify) chippage	37	Rubbing Stone	-		
Utilized Flakes	3	Other (specify)			
Weight	e de la companya del companya de la companya del companya de la co				
Bone		<u>Shell</u>			
Fragments	***************************************	Mollusc	4		
Artifacts (specify)		Turtle			
Pottery					
Rim sherds		Body sherds			
Clay pipe					
Other (specify)			(4) (3)		

Site Bussies Site KBS-77-11/20	AE 146	Classifier <u>Patti Mettler</u>	
Square Surface Survey		Today's Date5/31/77	
Level or Feature		Date Material 5/19/77 Collected	
Chipped Stone		Ground Stone	
Biface (describe) projectile point	_1	Celt	-
		Grooved Ax	
Uniface (describe)		Adz	
Drill		Mortar	**********
Core		Pestle	
Other (specify) chippage	9	Rubbing Stone	***************************************
Utilized Flakes		Other (specify)	
Weight			
Bone		Shell	
Fragments		Mollusc	1
Artifacts (specify)		Turtle	***************************************
Pottery			
Rim sherds		Body sherds	-
Clay pipe	-		1400
Other (specify)			

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Depar ement	01	1111		opo	- 6	J
Artifact	: Co	ownt	R	eco	rd	

Site Dunningville: KBS-77-12/20 AE 147		Classifier _Joyce Tressler		
SquareSurface Collection	1	Today's Date5/24/77		
Level or Feature		Date Material Collected5/19/77		
Chipped Stone		Ground Stone		
Biface (describe)		Celt	-	
Thifasa (dagamika)		Grooved Ax		
Uniface (describe)		Adz		
Drill	-	Mortar		
Core	-	Pestle	3	
Other (specify) chippage	2	Rubbing Stone		
Utilized Flakes	1	Other (specify)		
Weight	1			
Bone		<u>Shell</u>		
Fragments		Mollusc	Western Commence	
Artifacts (specify)		Turtle		
Pottery				
Rim sherds		Body sherds		
Clay pipe			ye €	
Other (specify)				

Site <u>Slotman KBS-77-13/20 AE 148</u>		ClassifierJoyce Tressler		
SquareSurface Collection		Today's Date5/24/77		
Level or Feature		Date Material Collected 5/19/77		
Chipped Stone		Ground Stone		
Biface (describe) point base	_1	Celt		
		Grooved Ax		
Uniface (describe)		Adz	-	
Drill		Mortar		
Core		Pestle	T.	
Other (specify)		Rubbing Stone	********	
Utilized Flakes	_1	Other (specify)	**********	
Weight				
Bone		Shell		
Fragments		Mollusc		
Artifacts (specify)		Turtle		
Pottery				
Rim sherds		Body sherds		
Clay pipe		e	11.14	
Other (specify)		8		

Site Bataglia KBS-77-14 /20 AE 149 Square Surface Collection		Classifier _Joyce Tressler Today's Date5/24/77		
Chipped Stone		Ground Stone		
Biface (describe) points scraper	2	Celt		
	ĕΤ	Grooved Ax	*	
Uniface (describe)		Adz	-	
Drill T-Drill		Mortar		
Core	-	Pestle		
Other (specify) flakes & Chips	68	Rubbing Stone		
Utilized Flakes	6	Other (specify) Hammerstone	1	
Weight	-			
Bone		Shell		
Fragments	_1	Mollusc		
Artifacts (specify)		Turtle		
Pottery				
Rim sherds		Body sherds	ā	
Clay pipe	-	9		
Other (specify)		W a		

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Firecracked rock (3 pieces)

Hamilton Bayou

SiteKBS-77-15 /20 AE 150		Classifier Joyce Tressler		
Square Surface Collection		Today's Date	5/24/77	_
Level or Feature		Date Material Collected	5/23/77	_
Chipped Stone		Ground Stone		
Biface (describe) point scraper	1	Celt		_
Uniface (describe)	•	Grooved Ax		_
Unitace (describe)	A Comment of the Comm	Adz	4	_
Drill		Mortar		_
Core	,,,,,,,,,,, ,,	Pestle		_
Other (specify) flakes scraper	6	Rubbing Stone	-	_
Utilized Flakes	* 2	Other (specify)		
Weight		2		
Bone	×	Shell		
Fragments tubular	_1	Mollusc	-	_
Artifacts (specify)		Turtle	-	
Pottery				
Rim sherds		Body sherds		_
Clay pipe	-		<u>_19</u>	
Other (specify)	-			

Site _Tucker KBS-77-16 /20 AE 151		ClassifierJoyce Tressler		
Square _Surface Collection =		Today's Date5/24/77		
Level or Feature		Date Material Collected 5/18/77		
Chipped Stone		Ground Stone		
Biface (describe)		Celt .	_	
Uniface (describe)		Grooved Ax		
Unitace (describe)		Adz	_	
Drill		Mortar	_	
Core		Pestle	_	
Other (specify) Block flakes 2	_10 total	Rubbing Stone	_	
chips 1, flakes 7 Utilized Flakes		Other (specify)	_	
Weight				
Bone	¥	Shell.		
Fragments bird tibia	_1	Mollusc	_	
Artifacts (specify)		Turtle		
Pottery				
Rim sherds		Body sherds		
Clay pipe			+	
Other (specify)				

² pieces historic ceramics -- (1)"flow blue", (1) crock

¹ piece fire-cracked rock

Site Nyboer KBS-77-17 /20 AE 152		Classifier _Robert Hutton_		
SquareSurface Collection		Today's Date5/24/77		
Level or Feature		Date Material Collected5/23/77		
Chipped Stone		Ground Stone		
Biface (describe) projectile point		Celt		
3		Grooved Ax		
Uniface (describe)		Adz		
Drill	-	Mortar	-	
Core		Pestle	-	
Other (specify) chippage		Rubbing Stone		
Utilized Flakes		Other (specify)		
Weight				
Bone		Shell Shell		
Fragments		Mollusc		
Artifacts (specify)		Turtle		
Pottery				
Rim sherds		Body sherds		
Clay pipe	-		Y IN	
Other (specify)			(*)	

Site Berens KBS-77-18/20 AE 153 Square Surface Collection		Classifier Robert Hutton Today's Date 5/24/77		
Chipped Stone		Ground Stone		
Biface (describe)	2	Celt		
projectile point scraper		Grooved Ax		
Uniface (describe)		Adz		
Drill		Mortar		
Core		Pestle		
Other (specify) chippage	15	Rubbing Stone		
Utilized Flakes		Other (specify)		
Weight	*			
Bone		Shell .		
Fragments		Mollusc	1	
Artifacts (specify)		Turtle	3	
Pottery		Other	7	
Rim sherds		Body sherds		
Clay pipe				
Other (specify)		ā		

Site Bower Site KBS-77-19/20 AE 154		Classifier <u>Jon Leader</u>		
Square Surface Survey		Today's Date5/31/77		
Level or Feature		Date Material Collected5/19/77		
Chipped Stone		Ground Stone		
Biface (describe) see back (point & blank)		Celt	8 -3	
Uniface (describe)	2	Grooved Ax	-	
see back (scrapers)	. 	Adz		
Drill		Mortar		
Core	_1	Pestle		
Other (specify) chippage	19	Rubbing Stone	:	
Utilized Flakes	-	Other (specify)	8	
Weight				
Bone		<u>Shell</u>		
Fragments		Mollusc		
Artifacts (specify)		Turtle	A	
Pottery		2.5		
Rim sherds		Body sherds	-	
Clay pipe				
Other (specify)			(1)	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

one piece of fire cracked rock

Chicken Farm Site KBS-77-20/20 AE 155		Classifier Patti Mettler	
SquareSurface Collection		Today's Date5/31/77	
Level or Feature		Date Material Collected 5/19/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Theiface (december)	3	Grooved Ax	
Uniface (describe)		Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) chippage		Rubbing Stone	
Utilized Flakes	•	Other (specify)	
Weight			
Bone		Shell.	
Fragments	_1	Mollusc	5
Artifacts (specify)		Turtle	-
Pottery			
Rim sherds		Body sherds	
Clay pipe	A		
Other (specify) historic ceramic	1	4	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 piece Norwood chert

Site VanderKolk KBS-77-21/20 AE	1 <u>5</u> 6	Classifier <u>Jon Leader</u>	
SquareSurface Collection		Today's Date5/31/77	
Level or Feature		Date Material Collected 5/25/77	
Chipped Stone		Ground Stone	
Biface (describe)	5	Celt	
	7	Grooved Ax	
Uniface (describe) scrapers	4	Adz	
Drill);	Mortar	
Core		Pestle	
Other (specify) chippage		Rubbing Stone	
Utilized Flakes	•	Other (specify)	
Weight	V		
Bone		<u>Shell</u>	
Fragments	***************************************	Mollusc	2
Artifacts (specify)		Turtle	-
Pottery			
9		Today about	
Rim sherds		Body sherds	•
Clay pipe		, x	
Other (specify)			1/

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Fire cracked rock - 2 pieces

Site Schatte KBS-77-22/20 AE 157		Classifier _Jon Leader		
Square Surface Survey		Today's Date	5/31/77	
Level or Feature		Date Material Collected	5/21/77	
Chipped Stone		Ground Stone		
Biface (describe)		Celt		
Uniface (describe)	1	Grooved Ax		
Unitade (describe)		Adz		
Drill		Mortar		
Core		Pestle		
Other (specify) chippage		Rubbing Stone		
Utilized Flakes		Other (specify)	3	
Weight	· · · · · · · · · · · · · · · · · · ·			
Bone		Shell.		
Fragments		Mollusc		4
Artifacts (specify)	1	Turtle		
Pottery				
Rim sherds		Body sherds	9	
Clay pipe				, t. s
Other (specify)			a	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

one bone fragment

Site Sink Lake KBS-77-23/10 AE 158		Classifier <u>Patti Mettler</u>		
Square Surface Collection		Today's Date	5/31/77	
Level or Feature		Date Material Collected	5/25/77	
Chipped Stone		Ground Stone		
Biface (describe)		Celt		-
Uniface (describe)		Grooved Ax		
omilace (describe)		Adz		
Drill		Mortar		P
Core		Pestle		
Other (specify) chippage		Rubbing Stone		:
Utilized Flakes		Other (specify))	:
Weight				
Bone		Shell		
Fragments	2	Mollusc		55
Artifacts (specify)		Turtle		
<u>Pottery</u>				
Rim sherds	·	Body sherds		
Clay pipe	: :			, ж
Other (specify)				p.

Site Hiscock KBS-77-24/20 AE	159	Classifier _Joyce Tressler_	
SquareSurface Collection		Today's Date6/16/77	
Level or Feature		Date Material Collected5/26/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	*
Triface (describe)	1	Grooved Ax	
Uniface (describe) thumbnail scraper	: 	Adz	
Drill		Mortar)
Core		Pestle	0
Other (specify) chippage	14	Rubbing Stone	
Utilized Flakes	1 .	Other (specify)	-
Weight			
Bone		Shell .	
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	1
Clay pipe			
Other (specify)	:		

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 FCR

Site Eding Site KBS-77-25/20 AE 160		Classifier _Patti Mettler	
Square Surface Collection		Today's Date5/31/77	
Level or Feature		Date Material Collected5/27/77	
Chipped Stone		Ground Stone	
Biface (describe)	 .	Celt	-
		Grooved Ax	
Uniface (describe)	3	Adz	:
Drill		Mortar	
Core		Pestle	
Other (specify) chippage	_33	Rubbing Stone	
Utilized Flakes		Other (specify)	
Weight			
Bone		<u>Shell</u>	
Fragments	2	Mollusc	2
Artifacts (specify)		Turtle	
Pottery			
*			
Rim sherds		Body sherds	
Clay pipe			_ ×
Other (specify)			27

³ pieces fire cracked rock

¹ piece charcoal

Site		Classifier	
SquareSurface Collection		Today's Date ⁵ /31/77	
Level or Feature		Date Material Collected 5/27/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	A
Thiface (describe)		Grooved Ax	
Uniface (describe)		Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) chippage	13	Rubbing Stone	
Utilized Flakes		Other (specify)	
Weight			
Bone		Shell Shell	
Fragments		Mollusc	-
Artifacts (specify)	-	Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe		e e	F. H
Other (specify)			2

³ pieces fire cracked rock

¹ piece of fused glass

Artifact Go	dit kecord
Site <u>Loli-Pup KBS-77-27/20 AE 162</u>	Classifier <u>Patti Mettler</u>
SquareSurface Collection	Today's Date5/31/77
Level or Feature	Date Material Collected 5/27/77
Chipped Stone	Ground Stone
Biface (describe)	Celt
	Grooved Ax
Uniface (describe)	Adz
Drill	Mortar

Pestle

Shell

Other (specify) chippage Rubbing Stone Other (specify) Utilized Flakes

17

Weight

Fragments Mollusc Artifacts (specify) Turtle

Pottery

Bone

Core

Rim sherds Body sherds Clay pipe

Other (specify)

Hamilton (Big Ridge) Site KBS-77-28 /20 AE 163	Classifier Sroda	
Square _Surface Collection	Today's Date6/6/77	
Level or Feature	Date Material Collected6/1/77	
Chipped Stone	Ground Stone	
Biface (describe) 4 projectile points 2 knives 2	Celt	
Uniface (describe)1	Adz	
Drill	Mortar _	
Core	Pestle _	
quartzite flakes - 2 Other (specify) chert detritis - 34	Rubbing Stone	
Utilized Flakes	Other (specify)	
Weight		
Bone	Shell_	
Fragments (long) 1	Mollusc	
Artifacts (specify)	Turtle _	
Pottery		
Rim sherds	Body sherds	
Clay pipe		. 40
Other (specify) Historic 2	į.	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 fire-cracked rock

SiteKempker KBS-77-29/20 AE 164	Classifier Sroda
SquareSurface Collection	Today's Date6/6/77
Level or Feature	Date Material Collected ?
Chipped Stone	Ground Stone
Biface (describe)	Celt
projectile point	Grooved Ax
Uniface (describe)	Adz
Drill	Mortar
Core	Pestle
Other (specify) chert detritis23	Rubbing Stone
Utilized Flakes	Other (specify)
Weight	
Bone	Shell
Fragments	Mollusc
Artifacts (specify)	Turtle
Pottery	
Rim sherds	Body sherds
Clay pipe	
Other (specify)	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

2 fire-cracked rocks

SiteMud Ridge KBS-77-30	<u>0 /20 AE 165</u>	ClassifierJoyce Tressler	
SquareSurface Collection		Today's Date 6/6/77	
Level or Feature		Date Material 6/1/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
T. (5 - (1 - 11)	4	Grooved Ax	
Uniface (describe)		Adz	-
Drill		Mortar	n en
Core		Pestle	
Other (specify) $_{ m Flakes}$ - 13	44	Rubbing Stone	11
Chips - 31 Utilized Flakes	-	Other (specify)	
Weight			
Bone		<u>Shell</u>	
Fragments	1	Mollusc	-
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			, e
Other (specify)			_

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 fire-cracked rock

SiteJulius KBS-77-31/20 AE	166	ClassifierSroda	
SquareSurface Collection		Today's Date6/6/277	
Level or Feature		Date Material 6/1/77 Collected	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	9 122
projectile point Uniface (describe)		Grooved Ax	-
Unitace (describe)		Adz	3
Drill		Mortar	
Core	2	Pestle	-
Other (specify) chert detritis	3	Rubbing Stone	-
Utilized Flakes	· ·	Other (specify)	
Weight			
Bone		Shell	
Fragments	-	Mollusc	
Artifacts (specify)	()	Turtle	
Pottery			
Rim sherds	` ````	Body sherds	-
Clay pipe			
Other (specify)			

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 fire-cracked rock

Sand Ridge "A"

Site KBS-77-32 /20 AE 167		Classifier	
Square _Surface Collection		Today's Date <u>6/6/77</u>	
Level or Feature		Date Material 6/1/77 Collected	
Chipped Stone		Ground Stone	
Biface (describe) base of point Uniface (describe)		Celt Grooved Ax	
Drill		Adz	
Core Other (specify) flake	2	Pestle Rubbing Stone	
Utilized Flakes		Other (specify)	
Weight			
Bone		Shell.	
Fragments		Mollusc	1
Artifacts (specify)		Turtle	-
Pottery			
Rim sherds		Body sherds	-
Clay pipe	-		e (**)
Other (specify)			

Sandy Ridge "B"

Site KBS-77-33 /20 AE 168		Classifier Joyce Tressler	
Square _ Surface Collection		Today's Date <u>6-6-77</u>	
Level or Feature		Date Material Collected6-2-77	
Chipped Stone		Ground Stone	
Biface (describe) broken point		Celt	
Uniface (describe)		Grooved Ax	
unitace (describe)		Adz	
Drill		Mortar	
Core	-	Pestle	
Other (specify)		Rubbing Stone	
Utilized Flakes	¥1	Other (specify)	
Weight	·		
Bone		<u>Shell</u>	
Fragments long bone	_1	Mollusc	
Artifacts (specify)	***************************************	Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			, 20
Other (specify)			-

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 piece wood, partially burnt

1 fire-cracked rock

Site Spring Brook KBS-77-34 /20 AE 169	Classifier Sroda	
SquareSurface Collection	Today's Date 6-6-77	
Level or Feature	Date Material Collected?	
Chipped Stone	Ground Stone	
Biface (describe)1	Celt	
	Grooved Ax	
Uniface (describe)	Adz	
Drill	Mortar	
Core	Pestle	X
Other (specify) chert detritis3	Rubbing Stone	B
Utilized Flakes	Other (specify)	
Weight		
Bone	Shell	
Fragments long	Mollusc	1
Artifacts (specify)	Turtle	.0
Pottery		
Rim sherds	Body sherds	
Clay pipe	(8) (89)	
Other (specify) Historic 3		14

Site Tributary "A" KBS-77-3	35 /20 AE 170	Classifier <u>Joyce Tressler</u>	
SquareSurface Collection		Today's Date <u>6/6/77</u>	
Level or Feature		Date Material Collected6/2/77	
Chipped Stone	¥	Ground Stone	
Biface (describe)		Celt	
7		Grooved Ax	
Uniface (describe)		Adz	
Drill	-	Mortar	
Core		Pestle	
Other (specify) Flakes	11	Rubbing Stone	
Utilized Flakes	i	Other (specify)	-
Weight			
Bone		<u>Shell</u>	
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			
Other (specify)			

SiteTributary "B" KBS-77-3	6/20 AE 171	Classifier <u>Joyce Tressler</u>	
Square Surface Collection		Today's Date <u>6/6/77</u>	
Level or Feature		Date Material Collected 6/2/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)		Grooved Ax	
UNITACE (describe)	-	Adz	
Drill		Mortar	770
Core	-	Pestle	
Other (specify) $\begin{array}{c} \text{flakes} - 5 \\ \text{chips} - 3 \end{array}$	8	Rubbing Stone	
Utilized Flakes		Other (specify)	
Weight	-		
Bone		<u>Shell</u>	
Fragments		Mollusc	
Artifacts (specify)	***************************************	Turtle	
Pottery			
Rim sherds	0	Body sherds	-
Clay pipe			. *
Other (specify)			78.1

Site Berens Point KBS-77-37	7 /20 AE 172	Classifier Joyce Tressler	
Square Surface Collection		Today's Date6/6/77	
Level or Feature		Date Ma t erial Collected6/2/77	
Chipped Stone	<i>3</i> 0	Ground Stone	
Biface (describe) scraper?	1	Celt	
Uniface (describe)		Grooved Ax	
(Adz	
Drill		Mortar	-
Core		Pestle	
Other (specify) flake		Rubbing Stone	
Utilized Flakes	1	Other (specify)	(
Weight			
Bone		<u>Shell</u>	
Fragments	1	Mollusc	:
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			
Other (specify)			

SiteKlingenburg KBS-77-	38 /20 AE 173	Classifier Sroda	, , , ,
SquareSurface Collection		Today's Date <u>6/6/77</u>	
Level or Feature		Date Material Collected6/2/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	December 2
Uniface (describe)		Grooved Ax	
unitace (describe)	-	Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) chert detritis	7	Rubbing Stone	
Utilized Flakes	7.00	Other (specify)	
Weight			
Bone		<u>Shell</u>	
Fragments	8	Mollusc	
Artifacts (specify)	-	Turtle	
Pottery			
Rim sherds		Body sherds	l ander to the same to the sam
Clay pipe			. *
Other (specify)			

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 fire-cracked rock

Site <u>Schotten KBS-77-39 / 20</u>	0 AE 174	Classifier	
Square _Surface Collection		Today's Date6/6/77	
Level or Feature		Date Material Collected 6/2/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe) point?	1	Grooved Ax	
onitace (describe) point:		Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) chippage -4 flake - 1	5	Rubbing Stone	
Utilized Flakes		Other (specify)	
Weight			
Bone		Shell	
Fragments		Mollusc	
Artifacts (specify)	-	Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe	-		, *
Other (specify)			

Site Emerson KBS-77-40 /20 AE 175	ClassifierSroda
Square _Surface Collection	Today's Date6/6/77
Level or Feature	Date Material Collected 6/2/77
Chipped Stone	Ground Stone
Biface (describe)1	Celt -
	Grooved Ax
Uniface (describe)	Adz
Drill	Mortar
Core	Pestle
Other (specify) chert detritis 3	Rubbing Stone
Utilized Flakes	Other (specify)
Weight	
Bone	<u>Shell</u>
Fragments	Mollusc
Artifacts (specify)	Turtle
Pottery	
Rim sherds	Body sherds
Clay pipe	
Other (specify)	

Site Rigterink KBS-77-41	/20 AE-176	Classifier <u>Luis Uribe</u>	
Square _Surface Survey		Today's Date <u>6/16/77</u>	
Level or Feature		Date Material Collected6/7/77	
Chipped Stone		Ground Stone	
Biface (describe) Point	_1	Celt	
Uniface (describe)		Grooved Ax	
Unitace (describe)		Adz	3
Drill		Mortar	-
Core		Pestle	-
Other (specify) Unutilized flakes	5	Rubbing Stone	
Utilized Flakes	· · · · · · · · · · · · · · · · · · ·	Other (specify)	
Weight			
Bone		<u>Shell</u>	27
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			
Other (specify)			

SiteAlbers KBS-77-42/20 AE 177	ClassifierDon Weston
SquareSurface Collection	Today's Date6/7/77
Level or Feature	Date Material Collected 6/7/77
Chipped Stone	Ground Stone
Biface (describe)	
thumbnail scraper	Grooved Ax
Uniface (describe)	Adz
Drill	Mortar
Core	Pestle
Other (specify) blocky flakes	Rubbing Stone
Utilized Flakes	Other (specify)
Weight	
Bone	<u>Shell</u>
Fragments	Mollusc
Artifacts (specify)	Turtle
Pottery	
Rim sherds	Body sherds
Clay pipe	
Other (specify)	

Site C & O Blowout KBS-77-	43 /20 AE 178	Classifier _Joyce Tressler	
SquareSurface Collection		Today's Date 6/16/77	
Level or Feature		Date Material Collected 6/7/77	
Chipped Stone		Ground Stone	
Biface (describe)	···········	Celt	
Thisan (density)		Grooved Ax	
Uniface (describe)	E .	Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) Chippage	11	Rubbing Stone	
Utilized Flakes	<u> </u>	Other (specify)	*
Weight			
Bone		Shell.	
Fragments		Mollusc	1_
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			
Other (specify)			_

Remarks: Note presence of charcoal, fire-cracked rock, etc.

5 pieces historic ceramics

SitePalmer Bayou KBS-77-	<u>44 <u>/</u>20 AE</u> 179	Classifier <u>Kelcey Dodds</u>	
SquareSurface Collection		Today's Date <u>6/8/77</u>	
Level or Feature		Date Material Collected6/7/77	d .
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)		Grooved Ax	-
onfiace (describe)		Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) chert	4	Rubbing Stone	
Utilized Flakes	8*	Other (specify)	i.
Weight unutilized flakes	3		
Bone		<u>Shell</u>	
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery	8#3		
Rim sherds		Body sherds	
Clay pipe		a a	, е
Other (specify)	-		_

Site Nevenzel KBS-77-45 /20) AE 180	Classifier Kelcey Dodds	
Square Surface Collection		Today's Date <u>6/8/77</u>	
Level or Feature		Date Material Collected6/7/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)		Grooved Ax	
UMITACE (describe)		Adz	
Drill		Mortar	·
Core	-	Pestle	
Other (specify) chert	10	Rubbing Stone	
Utilized Flakes	5	Other (specify)	-
Weight unutilized flakes	21		
Bone		<u>Shell</u>	
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds	-	Body sherds	-
Clay pipe		as A	, A 140
Other (specify)			

Site Van Voord KBS-77-46 /20) AE 181	Classifier <u>Kelcey Dodds</u>	
Square Surface Collection		Today's Date6/8/77	
Level or Feature		Date Material Collected 6/7/77	
Chipped Stone		Ground Stone	
Biface (describe) purpleish, broken		Celt	
point		Grooved Ax	
Uniface (describe)		Adz	
Drill		Mortar	
Core		Pestle	-
Other (specify)		Rubbing Stone	
Utilized Flakes	•	Other (specify)	
Weight			
Bone		<u>Shell</u>	
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds	0	Body sherds	
Clay pipe			, le
Other (specify)			

SiteTowers KBS-77-47 /20 AE 1	.82	Classifier	Joyce Tressler	
SquareSurface Collection		Today's Date	6/16/77	
Level or Feature		Date Material Collected		
Chipped Stone		Ground Stone	¥i	
Biface (describe)		Celt		
Thiface (decembe)		Grooved Ax		
Uniface (describe)		Adz		
Drill		Mortar		
Core		Pestle		
Other (specify)		Rubbing Sto	ne	
Utilized Flakes		Other (spec	ify)	3
Weight				
<u> 3one</u>		Shell.		
Fragments		Mollusc		***************************************
Artifacts (specify)		Turtle		-
ottery				
Rim sherds		Body sherds		
Clay pipe			×	6
Other (specify)				

Site Jerome KBS-77-48 /20	AE 183	ClassifierJon Leader	
Square _ Surface Collection		Today's Date 6/16/77	
Level or Feature		Date Material Collected6/8/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
*		Grooved Ax	
Uniface (describe)	-	Adz	
Drill	-	Mortar	
Core		Pestle	
Other (specify) chippage	6	Rubbing Stone	
Utilized Flakes		Other (specify)	
Weight	-		
Bone		Shell Shell	
Fragments	1	Mollusc	1
Artifacts (specify)	*************	Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe		2 0	140
Other (specify)		20	(10.00

Remarks: Note presence of charcoal, fire-cracked rock, etc.

2 pieces fire-cracked rock

Site Schaap KBS-77-49 /20	AE 184	Classifier Jon Leader	
Square _Surface Collection		Today's Date 6/16/77	
Level or Feature		Date Material Collected 6/8/77	
Chipped Stone		Ground Stone	
Biface (describe)	<u> </u>	Celt	
Uniface (describe)	,	Grooved Ax	
Unitace (describe)		Adz	
Drill		Mortar	
Core		Pestle -	
Other (specify) Decortication flake		Rubbing Stone	
Utilized Flakes		Other (specify) Pecked stone	1
Weight			
Bone		Shell	
Fragments	1	Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe	-	, a	ar i
Other (specify)			

SiteSchaap Firepits KBS-7	7-50/20 AE 185	ClassifierDon Weston	
Square Surface Collection		Today's Date6/10/77	(#
Level or Feature		Date Material 6/10/77 Collected	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
W-16 (111-)		Grooved Ax	
Uniface (describe)		Adz	-
Drill	: 	Mortar	
Core		Pestle	-
Other (specify)	-	Rubbing Stone	-
Utilized Flakes		Other (specify)	:
Weight			
Bone		<u>Shell</u>	
Fragments	***************************************	Mollusc	
Artifacts (specify)		Turtle	-
Pottery			
Rim sherds		Body sherds	
Clay pipe			45
Other (specify)			ă)

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Numerous fire-cracked rock on surface not collected

SiteSchaap Mound KBS-77-51/20 AE	186 Classifier Don Weston
SquareSurface Collection	Today's Date6/18/77
Level or Feature	Date Material 6/18/77 Collected
Chipped Stone	Ground Stone
Biface (describe)	Celt
Thiface (describe)	Grooved Ax
Uniface (describe)	Adz
Drill	Mortar
Core	Pestle
Other (specify)	Rubbing Stone
Utilized Flakes	Other (specify)
Weight	
Bone	<u>Shell</u>
Fragments	Mollusc
Artifacts (specify)	Turtle
Pottery	
Rim sherds	Body sherds
Clay pipe	
Other (specify)	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

No surface collection made - mound in Woods

SiteJerry KBS-77-52 /20 A	AE 187	Classifier J. Tressler	
Square _Surface Collection		Today's Date6/16/77	
Level or Feature		Date Material Collected 6/10/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)		Grooved Ax	
unitace (describe)		Adz	
Drill	-	Mortar	
Core	(Pestle	
Other (specify) Chippage	95	Rubbing Stone	
Utilized Flakes		Other (specify)	×
Weight			
Bone		<u>Shell</u>	
Fragments	2	Mollusc	2
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe	,		
Other (specify)			-

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Historic -- 2 porcelaim, 1 button, 1 piece glass

- 2 fire-cracked rocks
- 2 pieces wood

SiteAustinKBS-77-53 /20 AE	188	ClassifierJoyce Tressler	
Square Surface Collection		Today's Date6/16/77	
Level or Feature		Date Ma t erial Collected6/9/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt _	
Uniface (describe)		Grooved Ax	
Unitace (describe)		Adz	
Drill		Mortar	
Core		Pestle _	
Other (specify) Chippage	7	Rubbing Stone	
Utilized Flakes	•	Other (specify)	
Weight -			
Bone		Shell Shell	
Fragments -	1	Mollusc	
Artifacts (specify)		Turtle -	
Pottery			
Rim sherds		Body sherds	
Clay pipe		€	
Other (specify)			-

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Fire-cracked rock - 1 Historic Ceramics - 1

Wood - 1

Site Lundy Pointe KBS-77-54	/20 AE 189	ClassifierJon Leader	
Square Surface Collection		Today's Date6/16/77	
Level or Feature		Date Material Collected 6/9/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)		Grooved Ax	
oniidee (descrise)		Adz	-
Drill	/. 	Mortar	
Core		Pestle	
Other (specify) Chippage	13	Rubbing Stone	
Utilized Flakes	<u>i</u>	Other (specify)	
Weight			
Bone		Shell Shell	
Fragments	-	Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds	y - 1 - 1 - 1 - 1 - 1	Body sherds	*
Clay pipe		e e	
Other (specify)			

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 piece fire-cracked rock

Site High Point KBS-77-55	/20 AE 190	ClassifierJ. Tressler	
Square Surface Collection		Today's Date6/16/77	
Level or Feature		Date Material Collected6/10/77	
Chipped Stone		Ground Stone	
Biface (describe) scraper		Celt	
Uniface (describe) scraper	1	Grooved Ax	
onitace (describe) scraper		Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) chippage	5	Rubbing Stone	
Utilized Flakes	(*)	Other (specify)	-
Weight			
Bone		<u>Shell</u>	
Fragments		Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			2 44
Other (specify)			

Site <u>The Lohman Site</u> KBS	S-77-56 /20 AE 191	Classifier <u>Jon Leader</u>	
Square _Surface Collection		Today's Date <u>6/16/77</u>	
Level or Feature		Date Material Collected6/13/77	
Chipped Stone		Ground Stone	á)
Biface (describe) projectile point		Celt	******
		Grooved Ax	
Uniface (describe) scraper	1	Adz	
Dril1		Mortar	
Core	1	Pestle	
Other (specify)	-	Rubbing Stone	
Utilized Flakes	*	Other (specify)	
Weight	National Control of the Control of t		
Bone		Shell	
Fragments		Mollusc	
Artifacts (specify)	-	Turtle	
Pottery			
Rim sherds		Body sherds	-
Clay pipe			
Other (specify)			4

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 piece fire-cracked rock

SiteIndian Shores KBS-77-57 /20	Classifier Jon Leader	
Square _Surface Survey	Today's Date6/16/77	_
Level or Feature	Date Material Collected	
Chipped Stone	Ground Stone	
Biface (describe)	Celt	_
Triface (describe)	Grooved Ax	_
Uniface (describe)	Adz	_
Drill	Mortar	_
Core	Pestle	_
Other (specify)	Rubbing Stone	_
Utilized Flakes	Other (specify)	-
Weight		
Bone	Shell Shell	
Fragments	Mollusc	
Artifacts (specify)	Turtle	
Pottery		
Rim sherds	Body sherds	_
Clay pipe	· · · · · · · · · · · · · · · · · · ·	
Other (specify)	,80	

Remarks: Note presence of charcoal, fire-cracked rock, etc.

2 pieces fire-cracked rock

Site Pine Point KBS-77-	58 /20 AE 193	Classifier Joyce Tressler	
SquareSurface Collection		Today's Date6/16/77	
Level or Feature		Date Material Collected ?	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)		Grooved Ax	
	·	Adz	
Drill		Mortar	
Core		Pestle	
Other (specify) Chippage	5	Rubbing Stone	
Utilized Flakes	25	Other (specify)	·
Weight	-		a)
Bone		Shell	
Fragments	-	Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			,
Other (specify)		a a	****

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		partment of Ant Artifact Count			
Site	Swan Creek, Campsite #6 KBS-77-59 /20 AE 195	<u> </u>	Classifier	Joyce Tressler	
Square _	Surface Collection		Today's Date _	6/16/77	
Level or Feature	£		Date Material Collected	?	
Chipped :	Stone		Ground Stone		
Biface	(describe)		Celt	#0 #0	
Thi face	(dosariba)		Grooved Ax		-
Uniface (describe)		Adz			
Drill			Mortar		
Core			Pestle		
Other	(specify) Chippage	3	Rubbing Ston	e	
Utiliz	ed Flakes		Other (speci	fy)	
Weight					
Bone			<u>Shell</u>		
Fragmen	nts		Mollusc		
Artifa	cts (specify)		Turtle		
Pottery					
Rim sh	erds		Body sherds		
Clay p	ipe				, 141
Other	(specify)	-		¥	,

- 1 fire-cracked rock
- 1 piece historic ceramics

Site Elam KBS-77-60 /20 AE 195		Classifier <u>Joyce Tressler</u>			
SquareSurface Collection		Today's Date 6/16/77 Date Material Collected 6/14/77			
Level or Feature					
Chipped Stone		Ground Stone			
Biface (describe) tool fragmen	t1	Celt			
Uniface (describe)		Grooved Ax			
		Adz			
Drill	7	Mortar	-		
Core		Pestle			
Other (specify) chippage	11	Rubbing Stone Hammerstone	1		
Utilized Flakes		Other (specify)	0 -101-1-1-1		
Weight					
Bone		Shell.			
Fragments	:	Mollusc			
Artifacts (specify)		Turtle	(-)		
Pottery					
Rim sherds		Body sherds	66		
Clay pipe		45	χ -		
Other (specify)			8.0		

Remarks: Note presence of charcoal, fire-cracked rock, etc.

1 fire-cracked rock

Site Sand Creek KBS-77-6	1 /20 AE 196	Classifier Joyce Tressler	
SquareSurface Collection		Today's Date6/16/77	
Level or Feature		Date Material Collected 6/15/77	
Chipped Stone		Ground Stone	
Biface (describe)		Celt	
Uniface (describe)	g.	Grooved Ax	
omrace (describe)	·	Adz	
Drill	7	Mortar	
Core		Pestle	
Other (specify) Chippage	5	Rubbing Stone	
Utilized Flakes		Other (specify)	
Weight			
Bone		<u>Shell</u>	
Fragments Burnt	_1	Mollusc	
Artifacts (specify)		Turtle	
Pottery			
Rim sherds		Body sherds	
Clay pipe			
Other (specify)			

Site Miligrove KBS-//-62/20 A	E 197	ClassifierDoi	n weston		
Square Surface Collection		Today's Date	6/15/77	*	
Level or Seature		Date Material Collected			
Chipped Stone		Ground Stone		141	
Biface (describe) Uniface (describe)	,	Celt Grooved Ax			
Drill		Adz Mortar		į	
Core		Pestle			
Other (specify)		Rubbing Stone			
Utilized Flakes		Other (specify	·)	l v	
Weight		192			
Bone		<u>Shell</u>			
Fragments	(Mollusc		50	
Artifacts (specify)	-	Turtle		v 9	-
Pottery					
Rim sherds	S -2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	Body sherds		3	
Clay pipe	·				34
Other (specify)				ž.	(4)

Remarks: Note presence of charcoal, fire-cracked rock, etc.

Surface collection in possession of land owner - Clarence Hiscock Photographed 6/15/77