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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The report contains the findings of an archeological investigation conducted at the Long Branch Lake project, located in the Chariton River Valley, in northeastern Missouri. Documentation is provided for 7,000 years of continuous occupation of the river valley from the Middle Archaic to the Historic periods. Subsistence, settlement, and trade patterns are discussed.		

LONG BRANCH LAKE ARCHAEOLOGICAL RESOURCES

MITIGATION OF ADVERSE EFFECTS OF LONG BRANCH
LAKE PROJECT UPON THE ARCHAEOLOGICAL RESOURCES

FINAL

by
Larry Grant ham

AN ARCHAEOLOGICAL PROJECT CONDUCTED FOR
U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

by
NORTHEAST MISSOURI STATE UNIVERSITY
KIRKSVILLE, MISSOURI

DACW 41-78 -C -0103

1986

Part 2

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PART 2

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This site lies on the left (east) bank of the East Fork approximately a mile north of the dam axis. The site lies on a high hill at the southern end of a large meander loop of the river. There is a deep draw along the southern edge of the site. Slopes are steep along the northern and western edges of the site indicating that at one time the river flowed along these edges. The river originally flowed 100 feet west of the hill. The site is estimated to be approximately 400 feet east-west by 100 feet north-south. The elevation of the site is 775 to 792 feet m.s.l. Material density was high. There were originally trees along the northern and western edges of the site. These were removed under the clearing contract. Numerous bare areas were created, and subsequent material was collected from these areas.

Additional excavations on the site were considered necessary. The site was selected for excavation on the basis of the components present. The site contains Middle Woodland, Late Woodland, and Mississippian components. This period of occupation spans a significant change from intensive plant processing sites to smaller winter camps and to hunting camps. This site was the only large Late Woodland and Mississippian site located in the river valley. Data pertinent to refinement of cultural inventory, isolation of components, and a cultural feature record in order to assess change in subsistence base were sought.

Eleven, one and one-half meter squares were excavated on the site (Figure 49). Excavations were laid out just south of the 1974 excavations. As the reference points for the 1974 excavations had been removed under the clearing contract, it was not possible to precisely locate the old excavations when the excavations were laid out. As the stumps of the reference trees still remained, it is doubtful that the error factor in the location of the old excavations is greater than five percent. The larger excavation unit was 4 1/2 meters north-south by 4 1/2 meters east-west. Two additional one and one-half meter squares were laid out to the west along the edge of the bluff and to the east up the hill (Figure 59).

Initially, the plowzone was removed from all of the excavation units. This level varied from fifteen to twenty-two centimeters in depth with the greater depth along the southern edge of the excavation unit. Sub-plowzone deposits were excavated in arbitrary ten centimeter levels. A total of two, ten centimeter levels were excavated below

23MC65
1978 EXCAVATIONS
ONE FOOT CONTOUR INTERVAL

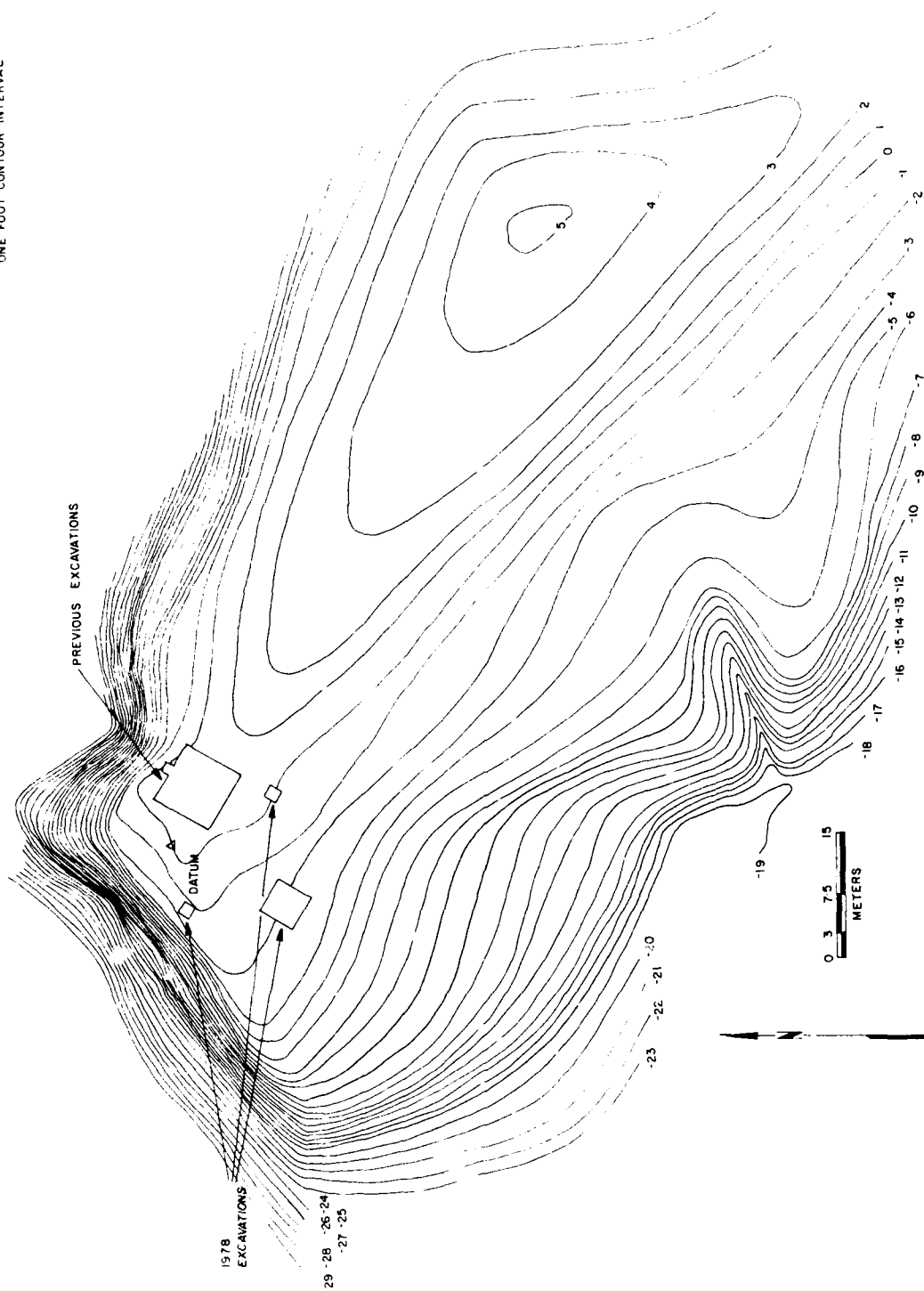


Figure 59. 23MC65. Site Map and Location of Excavations.

the plow-zone. The total depth of the excavations ranged from twenty-five to thirty centimeters below the surface.

No visible cultural stratigraphy with sharp horizon boundaries was noted in the excavations, although deposits do exhibit relative cultural stratigraphy. Deposits are fairly uniform throughout. The only physical stratigraphy noted was the result of soil horization. An Ap-horizon extended from the surface to a depth of approximately twenty centimeters below the surface. A B1-horizon extended from the base of the plowzone to a depth of approximately thirty-five centimeters below the surface. A B2-horizon extended for an undetermined depth below that point.

Features

Features 1 through 4 were recorded in previous excavations on the site (Grantham 1979). One additional feature was recorded during the present excavations.

Feature 5

This feature was a large basin-shaped pit in the southern portion of excavation unit 2004 and in the northern portion of excavation unit 2005. The feature consisted of a broad, shallow, basin-shaped pit with the greatest depth near the northern edge of the feature (Figure 60). The longest axis was roughly north-south and was 77.7 centimeters at its greatest length. The width of the feature was 69.9 centimeters. The greatest depth of the feature was 25.5 centimeters. The feature was easily distinguished by the great amount of ash and wood charcoal in the feature which contrasted sharply with the surrounding soil. Although the eastern edge of the feature was typically insloping, the western edge of the feature had been heavily contorted until the upper edge of the feature overhangs the lower edge. Associated material included a large amount of fire-cracked rock, a small amount of chert waste, a pecked and battered stone, and large quantities of wood charcoal. Charcoal consisted of largely unidentifiable fragments. Most of the identifiable specimens appear to be oak (Quercus sp.).

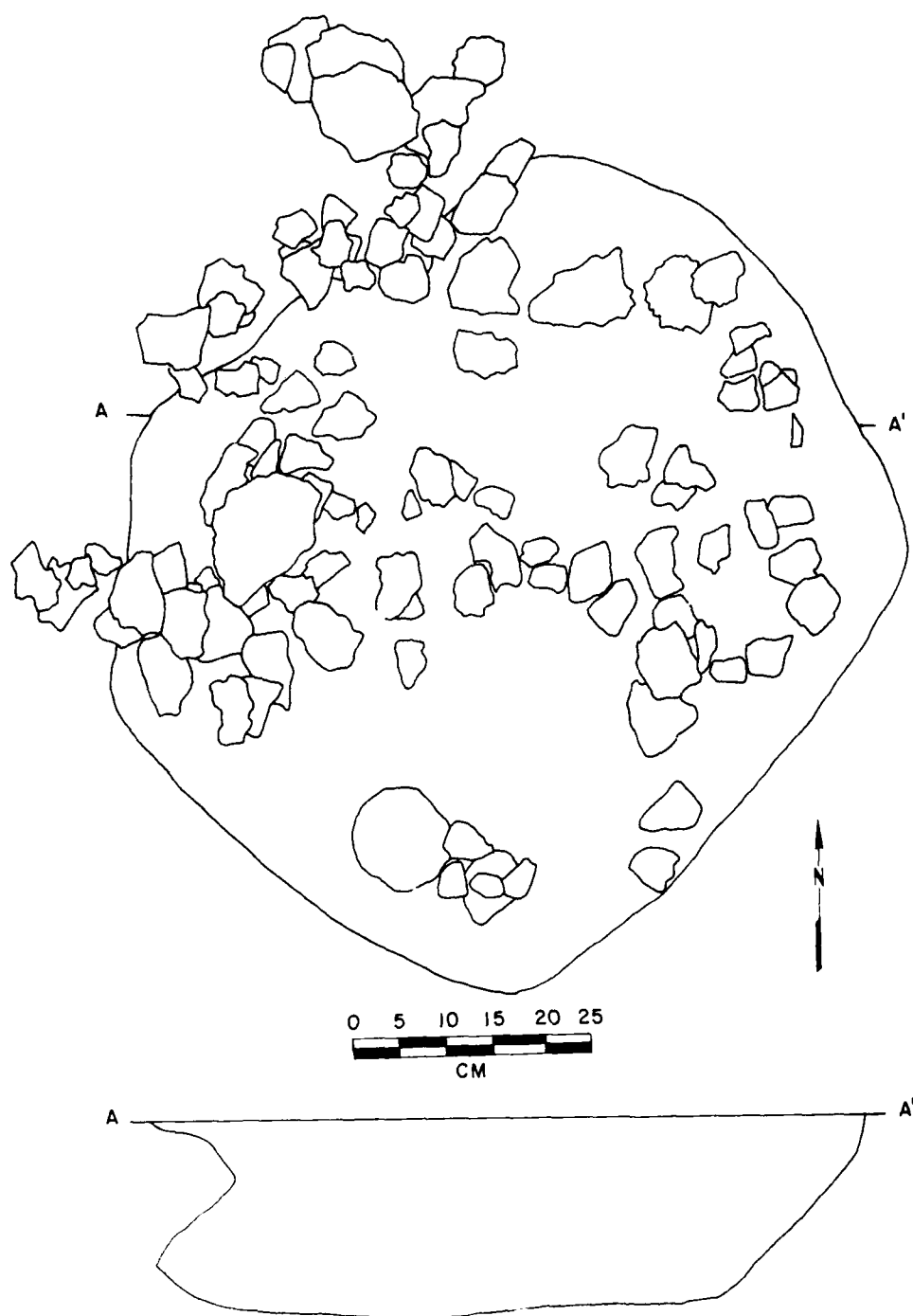


Figure 60. 23MC65. Feature 5.

23MC65

MATERIAL DISTRIBUTION
1978 EXCAVATIONS

- P POTTERY
- C CHERT WASTE
- BF BIFACE FRAGMENT
- CH CHIPPED HEMATITE
- RT RETOUCHE FLAKE
- PBB ● PECKED AND BATTERED STONE
- FIRE - CRACKED ROCK

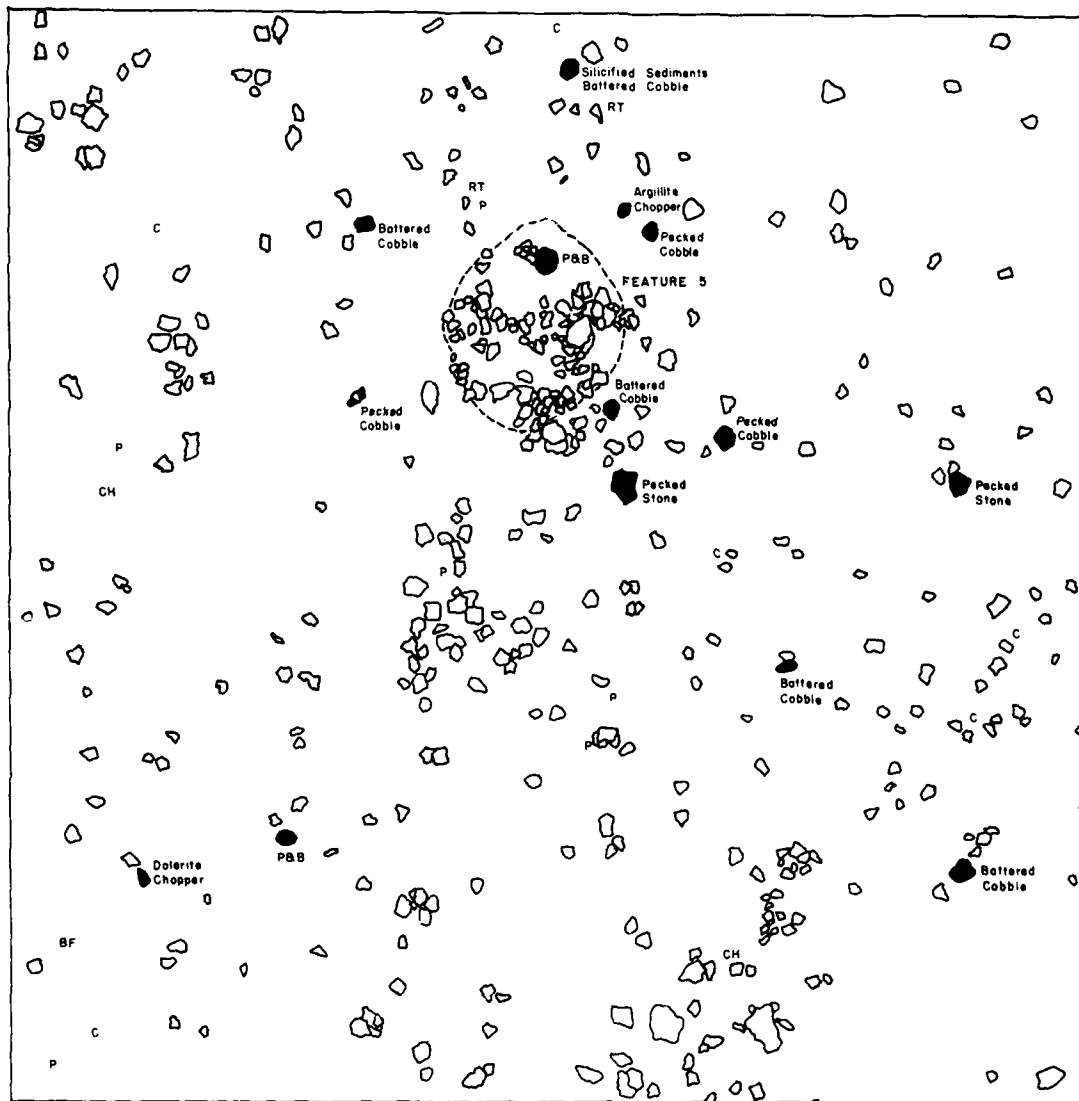
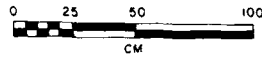


Figure 61. 23MC65. Distributional Map.

Description of Materials

Points

Group 7:a Concave-based, Expanding-stemmed Point - 1 (Figure 62,e)

The specimen in this category exhibits a slightly concave base, sharp stem-base juncture, expanding stem, abrupt shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of secondary pressure flaking with heavy tertiary pressure flaking. Primary flaking, if present, has been totally obscured. Secondary pressure flakes are small to medium in size, generally expanding, and inconsistent in size and distribution. Tertiary flake scars are medium in size, lamellar, and fairly consistent in size and distribution. This resharpening was unifacial-unilateral and has resulted in a distinct level so that the plane passing through the blade creates an angle of approximately thirty degrees with the plane passing through the base. Blank material is difficult to determine but probably did not pass through a preform stage. The specimen exhibits a small impact fracture on the distal end.

Group 12:a Side-notched, Concave-based Point - 1 (Figure 62, c)

The specimen in this category exhibits a concave base, sharp stem-base juncture, short straight outsloping stem, broad shallow side notches, slightly convex lateral margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion flaking and secondary and tertiary pressure flaking. Primary flake scars have largely been obscured by later flaking but appear to have been medium, expanding, uneven in size, and inconsistent in distribution. Secondary flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. Tertiary flake scars are generally small, lamellar, even in size, and even in distribution. Resharpening is unifacial-bilateral and has resulted in a distinct bevel of the blade so that the plane passing through the blade creates an angle of approximately thirty degrees from the plane passing through the base. The specimen exhibits basal thinning. One face has two flakes removed from the base and extends one-third the length of the face. The opposite face has one flake removed which extends two-thirds the length of the face.

Group 13:a Large, Shallow Side-notched Point - 1 proximal fragment (Figure 62, g)

The specimen in this category exhibits a very slightly concave base, rounded stem-base juncture, broad shallow side notches, weak shoulders, and a bi-convex cross-section. The chipping pattern is difficult to determine but appears to consist of primary percussion flaking, secondary percussion and pressure flaking, and percussion tertiary flaking. Primary flake scars appear to have been fairly large but has been largely obscured by later flaking. Secondary flake scars are small to medium, generally expanding, and inconsistent in both size and distribution. Tertiary flake scars are near the distal end of the remaining portion. Flake scars are relatively large, expanding, and inconsistent in size and distribution. These flakes appear to have been an attempt to rework the tool into another form. The specimen appears to have passed through a preform stage due to the islands of primary flaking and the relative thickness. The specimen exhibits a transverse stress fracture.

Group 14: a Large, Lobed-base Point - 1 proximal fragment (Figure 63, d)

The specimen in this category exhibits a slightly concave base, rounded stem-base juncture, slightly expanding stem, weak shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of secondary and tertiary pressure flaking. Primary flake scars, if present, have been totally obscured. Secondary flake scars are small, lamellar, uneven in size, and inconsistent in distribution. Tertiary flake scars are larger, still lamellar, fairly even in size, and inconsistent in distribution. Resharpening was unifacial-unilateral. Resharpening has been heavy and has altered the shoulders and lateral margins. The specimen exhibits a transverse stress fracture which extends down one face. It also has a longitudinal percussion fracture from the base along one margin.

Group 15: a-b Concave-based, Flaring-eared Points - 2 (Figure 62, a-b)

The specimens in this category exhibit concave bases, sharp stem-base junctures, flaring bases, no shoulders, straight to slightly convex lateral margins, and bi-convex cross-sections. The chipping pattern consists of primary percussion flaking and secondary and tertiary pressure flaking. Primary flake scars have been largely obscured by later flaking. The remaining flake scars are medium in

size, expanding, uneven in size and inconsistent in distribution. Tertiary flake scars are relatively small, generally lamellar, fairly even in size, and inconsistent in distribution. Both specimens exhibit basal thinning. Basal thinning consists of the removal of a single flake running approximately one-half of the face. Specimen 15:a exhibits heavy grinding of the stem and base. Light grinding also extends slightly onto the face. Specimen 15:a is complete, and specimen 15:b exhibits an impact fracture on the distal end and a percussion fracture from the base through one lateral margin.

Group 19:a-c Small, Triangular Points - 2, 1 proximal fragment (Figure 62, l; Figure 63, a-b)

The specimens in this category exhibit straight to slightly concave bases, straight to slightly convex lateral margins, and bi-convex cross-sections. The chipping pattern consists of secondary pressure flaking only. Flake scars are small to medium, generally lamellar, uneven in size, and inconsistent in distribution. None exhibit resharpening. Specimen 19:a exhibits a small impact fracture. Specimen 19:b exhibits a fracture from one lateral margin through the base. Specimen 19:c exhibits a transverse stress fracture.

Group 20:a Small, Side-notched Point - 1 proximal fragment (Figure 63, c)

The specimen in this category exhibits a straight base, sharp stem-base juncture, small narrow notched about one-sixth the distance up the lateral margin, straight lateral margins, and a bi-convex cross-section. The specimen is very small in size. The chipping pattern consists of secondary pressure flaking only. Flake scars are small, lamellar, fairly even in size, and evenly spaced in distribution. The notches were produced by the removal of two flakes, and final notch flakes originate from the same face. Blank material was a flake. There is a transverse stress fracture above the notches and an oblique stress fracture from one notch through the base.

Group 24:a Large, Straight-based, Corner-notched Point - 1 (Figure 62, d)

The specimen exhibits a straight base, rounded stem-base juncture, expanding stem, slightly oblique shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion flaking and secondary and tertiary pressure flaking. Primary flake scars have been largely obscured but appear to be relatively large, expanding, uneven in size and

inconsistent in distribution. Secondary flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. The specimen was burned prior to resharpening. The specimen exhibits resharpening which has removed the blackened surface and exposed the lighter interior. Tertiary flake scars are relatively small, generally lamellar, fairly even in size, and inconsistent in distribution. The specimen exhibits a fracture running from one corner of the base almost to the other corner of the base. After fracture, an attempt was made to rework that fracture or at least to dull the edges of the fracture.

Group 29:a Medium, Straight-based, Corner-notched Point - 1 proximal Fragment (figure 62, h)

The specimen in this category exhibits a straight narrow base, sharp stem-base juncture, basal-corner notches, extended oblique shoulders, and a bi-convex cross-section. The chipping pattern consists of secondary pressure flaking only. Flake scars are generally small, lamellar to expanding, and inconsistent in size and distribution. The specimen exhibits heavy basal grinding. The specimen has been highly altered after fracture. It apparently suffered a transverse fracture, the nature of which can no longer be determined. That fracture was then completely reworked, although in no discernible pattern. One of the shoulders has also been fractured.

Group 33:a-c Small, Straight-based Corner-notched Points - 2, 1 proximal fragment (Figure 62, i-k)

The specimens in this category exhibit straight bases, sharp stem-base junctures, short expanding stems, abrupt to weakly oblique shoulders, straight to convex lateral margins, and bi-convex cross-sections. The chipping pattern consists of secondary pressure flaking only. Flake scars are small, generally lamellar, fairly even in size, and inconsistent in distribution. None of the specimens exhibit resharpening. All appear to have had flakes as blanks. Specimen 33:c still retains one small area of the original ventral flake surface on one face. Specimen 33:b exhibits a heavy oblique impact fracture from one lateral margin through the opposite shoulder and extends down one face. Specimen 33:c exhibits a small distal impact fracture and a small fracture near the base of the stem from stem margin to stem margin.

Group 34:a Medium, Convex-based, Narrow Corner-notched Point - 1 proximal fragment (Figure 62, f)

The specimen in this category exhibits a convex base, rounded stem-base juncture, narrow corner notches, slightly

TABLE 23
Projectile Points
Artifact Measurements and Attributes - 23MC65

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Projectile Points</u>					
<u>Concave-based, Expanding-stemmed Point</u>					
7:a Sur.	26*	12	8	6g*	impact fracture
<u>Side-notched, Concave-based Point</u>					
12:a Sur.	62	29	6	15g	
<u>Large, Shallow Side-notched Point</u>					
13:a Sur.	34*	26	10	14g*	proximal fragment
<u>Large, Lobed-base Point</u>					
14:a Sur.	33*	23	9	7g*	proximal fragment
<u>Concave-based, Flaring-eared Points</u>					
15:a Sur.	48	27	7	9g	
15:b Sur.	45	22*	8	8g*	impact fractured, oblique fracture
<u>Small, Triangular Points</u>					
19:a Sur.	21*	23	6	2g*	impact fracture
19:b Sur.	28	20*	8	3g*	
19:c 2015	9*	19	4*	1g*	proximal fragment
<u>Small, Side-notched Point</u>					
20:a Sur.	5*	7	3	1g*	proximal fragment
<u>Large, Straight-based, Corner-notched Point</u>					
24:a Sur.	69	37	8	20g	
<u>Medium, Straight-based, Corner-notched Point</u>					
29:a 2018	25*	28*	5	3g*	proximal fragment
<u>Small, Straight-based Corner-notched Points</u>					
33:a Sur.	35	19	8	4g	
33:b Sur.	20*	17*	6*	2g*	proximal fragment
33:c Sur.	21*	19	5	2g*	impact fracture, basal fracture
<u>Medium, Convex-based, Narrow Corner-notched Point</u>					
34:a Sur.	26*	25*	8*	4g*	fractured, partially reworked
<u>Miscellaneous Unclassified Point Bases</u>					
45:a Sur.	15*	27*	6*	2g*	basal fragment
45:b Sur.	12*	25*	7*	2g*	basal fragment
45:c Sur.	9*	27*	7*	1g*	basal fragment
45:d 2187	11*	28*	7*	2g*	basal fragment
45:e 2014	5*	25*	6*	1g*	basal fragment
45:f 2015	7*	13*	4*	1g*	basal fragment
45:g Sur.	7*	14*	4*	1g*	basal fragment
<u>Miscellaneous Small Basal Point Fragments</u>					
46:a 2247	25*	18*	8*	2g*	basal fragment
46:b Sur.	13*	27*	6*	1g*	basal fragment
46:c Sur.	14*	12*	4*	1g*	basal fragment

oblique shoulders, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary pressure flaking. Primary flake scars are large and generally expanding. Secondary flake scars are small to medium, lamellar to slightly expanding, uneven in size, and inconsistent in distribution. The specimen lacks any observable resharpening. Blank material is difficult to determine but appears to have passed through a preform stage. The specimen exhibits a transverse stress fracture which removed the upper one-half of the point and extends downward onto one of the remaining faces. An attempt was made to rework the fracture, as numerous small flakes have been removed along one edge of the fracture. One of these flakes removed one entire edge of the remaining point fragment, and the fracture extends obliquely through the base.

Group 45:a-g Miscellaneous Unclassified Point Bases - 7
(Figure 63, e-k)

These specimens lack sufficient criteria for inclusion in any other class. All are basal fragments but are sufficiently incomplete that their inclusion in any other category is not possible. They may be divided into four subcategories based on morphology.

The first subcategory consists of bases with convex bases, sharp stem-base junctures, incurvate stems, and bi-convex cross-sections. There are two specimens in this subcategory. Both exhibit traces of primary percussion flaking. Secondary flake scars are small to medium, generally expanding, uneven in size and inconsistent in distribution. Specimen 45:a exhibits a transverse stress fracture across the stem, and specimen 45:b exhibits a compound transverse stress fracture around an inclusion in the chert.

The second subcategory also contains two specimens. These specimens exhibit straight bases, rounded stem-base junctures, incurvate stem margins, and bi-convex cross-sections. The chipping pattern on the remaining portions consists of secondary pressure flaking only. Flake scars are medium, generally lamellar, uneven in size, and inconsistent in distribution. These specimens also appear to have been broad corner-notched varieties. Both specimens exhibit transverse stress fracture across the stems. Specimen 45:c exhibits moderate basal grinding, but specimen 45:d lacks that attribute.

The third subcategory consists of a single specimen. This specimen exhibits a straight base, square stem-base

juncture, notches (probably side-notches, and a bi-convex cross-sections. The chipping pattern consists of secondary pressure flaking only. Flake scars are generally small, lamellar, fairly even in size, and inconsistent in distribution. The specimen exhibits a transverse stress fracture through the notches.

The fourth subcategory consists of two specimens. These specimens exhibit straight bases, sharp stem-base junctures, expanding stems, and bi-convex cross-sections. Both are small. The chipping pattern consists of secondary pressure flaking only. Flake scars are small and highly variable in shape, size, and distribution. Both specimens exhibit transverse stress fractures. Specimen 45:f exhibits basal grinding, and specimen 45:g lacks that attribute. Both specimens appear to be from small corner-notched varieties.

Group 46:a-c Miscellaneous Small Basal Point Fragments - 3
(Figure 63, 1-m)

These specimens exhibit criteria for basal point fragments (i.e. stem-base junctures and fractures where the shoulders should be) but lack sufficient criteria to include them in anything beyond that identification. No indication of original morphology remains. Specimen 46:a exhibits a portion of the base and stem (expanding) but has the remainder of the specimen heavily altered. It exhibits a longitudinal and transverse compound heat fracture. Specimen 46:b also exhibits a portion of the base and stem. The specimen exhibits a longitudinal stress fracture and a transverse compound heat fracture. An attempt was made to repair the longitudinal fracture, as small flake scars are present along one edge. Specimen 46:c exhibits a small portion of the base and stem. It exhibits an oblique stress fracture from the shoulder through the base.

Group 47:a-o Distal Projectile Point Fragments - 15

The specimens in this category have little in common. Specimens 47:a - 47:f appear to be fragments of relatively large points. The others are too small to estimate original size. All exhibit bi-convex cross-sections except specimen 47:g, which has a plano-convex cross-section. Specimens appear to have been worked by percussion and pressure flaking except for specimens 47:k, 47:l, and 47:o which have only secondary pressure flaking. Specimens 47:b, 47:c, 47:d, 47:h, 47:k, 47:j, 47:m, and 47:n exhibit evidence of some resharpener. Seven specimens exhibit transverse stress fractures; one specimen exhibits a compound transverse fracture around an inclusion in the chert; two

specimens exhibit compound transverse thermal fractures; one specimen exhibits a compound oblique fracture around an inclusion in the material; two specimens exhibit oblique transverse stress fractures; and one specimen exhibits a compound oblique fracture.

Group 48:a-e Medial Projectile Point Segments - 5

These specimens also have little in common. All lack both proximal and distal ends. Only specimens 48:a and 48:b appear to be from relatively large points. Specimen 48:a and 48:c exhibit resharpener of the lateral margins. Three specimens (48:a, 48:c, and 48:d) exhibit two transverse stress fractures. An attempt to rework one of the transverse fractures on specimen 48:d is apparent. Specimen 48:b exhibits two compound transverse thermal fractures. Specimen 48:e exhibits one transverse stress fracture and one fracture along an old fracture plane in the chert.

Group 49:a-j Projectile Point Shoulder Fragments - 10

The specimens in this category are fragments of projectile points with the shoulders included. Specimens 49:a and 49:b exhibit both shoulders and is a medial segment. The remainder exhibit one shoulder only. Specimens 49:c, 49:d, 49:e, 49:f, and 49:g have abrupt shoulders. Specimen 49:h, and 49:i have an extended oblique shoulder. Specimen 49:j appears to have been an extended oblique shoulder with square juncture. The latter specimen may have been from a basally notched point. Two specimens exhibit two transverse stress fractures; two specimens exhibit two transverse stress fractures and an undetermined longitudinal fracture; two specimens exhibit a transverse stress fracture and an oblique percussion fracture (specimen 49:f exhibits an attempt to rework the transverse stress fracture); two specimens exhibit a transverse stress and a longitudinal stress fracture; one specimen exhibits an oblique stress fracture; and one specimen exhibits an undetermined compound fracture.

Scrapers

Group 51:a End Scraper Made From a Flake - 1 fragment (Figure 64, a)

The specimen in this category is manufactured on a flake and has only one working element. The specimen is small and is a snubbed scraper. The specimen exhibits slightly steep retouch of the distal end. The remainder of the specimen is missing. The specimen appears to have

originally been roughly circular in outline. The specimen exhibits edge wear in the form of slight edge crushing and edge rounding on flake scars extending up the working face. The specimen exhibits a transverse stress fracture and an undetermined oblique fracture.

Drill-like Implements

Group 54:a-h Narrow, Drill-like Implements - 3, 3 medial fragments, 2 distal fragments (Figure 64, b-i)

Specimens in this category have long, narrow working elements. The working elements are thick and often appear to have been shaped by percussion as well as by secondary pressure flaking. The three specimens with bases intact all appear to have been manufactured from expended projectile points. Specimen 54:a appears to have been manufactured from a large corner-notched point; specimen 54:b from a concave-based point; and specimen 54:c from a convex-based corner-notched point. Specimen 54:a was reworked largely by secondary pressure flaking. Flake scars are small, lamellar, fairly even in size, and consistent in distribution. Reworking was done unifacial-bilateral so that a distinct level with an angle of approximately thirty degrees has been created. Specimen 54:b was reworked by heavy percussion. Flake scars are large, generally expanding, uneven in size, and inconsistent in distribution. It appears doubtful that the specimen could have been retouched again. Specimen 54:c appears to have been reworked by both pressure and percussion. Flake scars range from small to large, lamellar to expanding, are uneven in size, and inconsistent in distribution. Specimen 54:a exhibits an undetermined oblique fracture; specimens 54:b, and 54:c exhibit transverse stress fractures. Specimens 54:e and 54:f exhibit two transverse stress fractures, and specimen 54:d exhibits two transverse compound thermal fractures. Both specimens 54:g and 54:h exhibit a transverse stress fracture.

Group 55:a Small Drill-like Implement - 1 (Figure 64, j)

The specimen in this category is considerably smaller than the specimens in Group 54. The specimen also appears to have been reworked from a small, corner-notched projectile point. The flake scars are small, lamellar to slightly expanding, uneven in size, and inconsistent in distribution. Reworking appears to have been done largely by secondary pressure flaking. The specimen exhibits a small transverse stress fracture near the distal end.

Bifaces and Biface Fragments

Group 61:a Large, Thin, Pointed-Ovate Biface - 1 (Figure 65, a)

The specimen in this category exhibits a rounded base, convex lateral margins, pointed distal end, and a bi-convex cross section. The chipping pattern consists of primary percussion flaking over the entire specimen with careful secondary flaking down both lateral margins approximately two-thirds of the distance to the proximal end. This has removed the sinuous edge from the upper portion of the specimen. The remaining portion of the lateral margins and base lack the careful secondary trimming. Slight wear is present near the proximal end.

Group 62:a Small, Ovate Biface - 1 (Figure 65, e)

The specimen in this category is roughly ovoid in outline and has a bi-convex cross-section. The specimen was shaped almost exclusively by primary percussion flaking. There is a small amount of light secondary flaking on the proximal end. There is a slight amount of edge crushing present on the worked edge. The specimen may have been used in a scraping motion.

Group 63:a-c Small, Triangular Bifaces - 3 (Figure 65, b-d)

The specimens in this category exhibit slightly convex to convex bases, straight to slightly convex lateral margins converging toward a point, and bi-convex to plano-convex cross-sections. The chipping pattern consists of primary percussssion flaking and/or secondary pressure flaking. Specimen 63:a is formed largely by percussion flaking. It exhibits little or no secondary flaking. There is no discernible wear. The specimen has a small compound fracture at the distal end. Specimen 63:b was shaped by primary percussion and secondary pressure flaking. The specimen exhibits heavy wear in the form of edge rounding and flake scar ridge rounding on all edges and faces. Minute edge crushing also appears on the proximal end and indicates that the tool was probably used in a scraping motion. Specimen 63:c has a plano-convex cross-section and appears to have been shaped largely by secondary pressure flaking. The specimen exhibits slight edge crushing on the proximal end, but wear is very light.

Group 68:a-b Proximal Fragments - Thin, Broad Bifaces with Rounded Bases - 2 (Figure 65, q-h)

The specimens in this category exhibit convex bases, rounded edges, converging lateral margins, and bi-convex

TABLE 24
Scrapers, Drills, and Bifaces
Artifact Measurements and Attributes - 23MC65

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Scrapers</u>					
<u>End Scraper Made from Flake</u>					
51.a	Sur.	16*	26*	5*	2g*
<u>Drill-like Implements</u>					
<u>Narrow, Drill-like Implements</u>					
54.a	Sur.	54*	36	8	9g*
54.b	Sur.	50*	28	11	10g*
54.c	Sur.	39*	22	6	5g*
54.d	Sur.	15*	11*	6*	2g*
54.e	Sur.	15*	8*	7*	1g*
54.f	Sur.	18*	12*	5*	1g*
54.g	2181	12*	9*	6*	1g*
54.h	2247	28*	12*	8*	2g*
<u>Small Drill-like Implement</u>					
55.a	Sur.	19*	14	5	1g*
<u>Bifaces</u>					
<u>Large, Thin, Pointed-ovate Biface</u>					
61.a	Sur.	105	52	10	55g
<u>Small Ovoid Biface</u>					
62.a	Sur.	41	35	11	9g
<u>Small, Trianguloid Bifaces</u>					
63.a	Sur.	27	28	9	9g
63.b	Sur.	41	29	12	10g
63.c	Sur.	36	21	7	4g
<u>Proximal Fragments - Thin, Broad Bifaces with Rounded Bases</u>					
68.a	Sur.	35*	47	10	17g*
68.b	2010	35*	40	12	18g*
<u>Proximal Fragment - Thick, Narrow Biface with a Square Base</u>					
69.a	Sur.	29*	20	10	6g*
<u>Proximal Fragment - Thin, Narrow Biface with a Rounded Base</u>					
70.a	Sur.	18*	22	7	3g*
<u>Distal Fragment - Thick, Broad, Pointed Biface</u>					
71.a	Sur.	49*	51*	15*	34g*

cross-sections. The chipping pattern consists of primary percussion flaking. There is little or no secondary flaking on the specimens. There is also little or no wear on the specimens. Specimen 68:a exhibits a compound transverse fracture of undetermined nature, and specimen 68:b exhibits a transverse stress fracture.

Group 69:a Proximal Fragment - Thick, Narrow Biface with a Square Base - 1 (Figure 65, i)

The specimen in this category exhibits a relatively straight base, slightly convex lateral margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary pressure flaking. Both lateral margins appear to have been resharpened with secondary flaking. This has created a very slight bevel of approximately fifteen degrees. Wear on the lateral margins is not readily perceptible. The specimen exhibits a transverse stress fracture.

Group 70:a Proximal Fragment - Thin, Narrow Biface with a Rounded Base - 1 (Figure 65, j)

The specimen in this category exhibits a convex base, slightly convex lateral margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary pressure flaking. Primary flake scars have largely been obscured by later flaking. There is little or no observable wear. The specimen exhibits a transverse stress fracture.

Group 71:a Distal Fragment - Thick, Broad, Pointed Biface - 1 (Figure 65, f)

The specimen in this category exhibits slightly convex lateral margins, a slightly pointed distal end, and a bi-convex cross-section. The chipping pattern consists of primary percussion flaking only. The specimen lacks secondary edge trimming and still retains a sinuous edge. The specimen still retains an area of secondary cortex on each face. The specimen exhibits a transverse stress fracture.

Group 75:a-al Miscellaneous Thin Biface Fragments - 38

The specimens in this category consist of miscellaneous thin biface fragments too small to be able to determine what kind of tools they represent. They also lack any external attributes which would allow them to be included in any other category. These may be subdivided on the basis of chipping pattern.

The first subcategory consists of thin biface fragments with primary and secondary flake scars, careful edge trimming, and exhibiting evidence of resharpening. These vary in size and fracture patterns. There are six specimens in this subcategory.

The second subcategory consists of thin biface fragments with primary and secondary flake scars. Most exhibit some evidence of careful edge trimming but lack evidence of resharpening. These specimens vary considerably in size and fracture pattern. There are twenty specimens in this subcategory.

The third subcategory consists of thin biface fragments which exhibit primary percussion flaking only. They exhibit no attempt at edge trimming and retain a sinuous edge. All have little or no observable wear. Again, there is considerable variation in size and fracture patterns. There are nine specimens in this subcategory.

The fourth subcategory consists of medial biface fragments. There are three specimens in this subcategory. These specimens exhibit portions of both faces but do not have any of the edges remaining intact.

Group 76:a-aa Miscellaneous Thick Biface Fragments - 27-dd

This category consists of miscellaneous thick biface fragments too small to be able to determine what type of tools they represent. They exhibit no external attributes other than bifacial working which would allow their inclusion in any other category. The category may be subdivided on the basis of chipping pattern.

The first subcategory consists of thick biface fragments which exhibit primary percussion flaking only. Secondary flaking is absent, and all exhibit sinuous edges. All lack any observable wear. There is a considerable amount of variation in size and fracture pattern. There are seventeen specimens in this subcategory.

The second subcategory consists of thick biface fragments which exhibit primary percussion flaking and light secondary flaking to remove the sinuosity of the edges. These specimens also lack observable wear. There is considerable variation in sizes and fracture patterns. There are nine specimens in this subcategory.

The third subcategory consists of a thick biface fragment with primary and secondary flaking and careful edge trimming. The specimen exhibits resharpening. There is a single specimen in this subcategory.

The fourth subcategory consists of a single thick biface fragment which is a medial fragment and lacks any edges.

Cores

Group 77:a-k Polyhedral Cores - 11

This category includes chert nodules from which flakes have been driven off in a highly irregular fashion. Eight specimens still retain cortex on at least one face. Almost all are glacial chert and contain numerous fracture planes. Specimen 77:a, 77:b, and 77:c are fairly free of fracture planes.

Group 78:a-l Core Fragments - 12

The specimens included in this category are fragments of cores. They exhibit all of the external criteria of cores with one or more faces representing fracture planes or stress fractures. It appears that most are fragments of polyhedral cores. Five specimens still retain some cortex. All exhibit fairly numerous fracture planes.

Group 80:a-h Nuclei - 8

These specimens are chert cores which have been exhausted. All appear to have originally been polyhedral cores. Only one of the specimens still retains a small area of cortex. Flakes appear to have been struck from the edges in a highly irregular fashion. The quality of chert is similar to that of polyhedral cores. Most appear to be glacial chert or chert locally derived. Although several of the specimens are inordinately small, all have negative bulbs of percussion on all faces.

Miscellaneous Worked Chert

Group 83:a-i Miscellaneous Worked Chert - 9

These specimens have little in common except for the presence of working on at least one face and one edge. Some are roughly worked flakes or shatter while others are somewhat more similar to cores or core fragments. In all cases, the flaking is without a readily discernible pattern. They result from an attempt to work irregular or blocky chert into a tool form. Flaking is largely by percussion. While flaking is somewhat bifacial on five of the specimens, the intensity of flaking is not similar on alternate faces.

Flake Tools

Group 84:a-m Retouched Flakes - 13

The specimens in this category exhibit intentional modification of the flake margins by additional flake removal. Most of the specimens are fragmentary. Three specimens are relatively complete, and the remaining ten are fragments. Three specimens exhibit acute unifacial retouch. Two specimens have acute bifacial retouch. It is postulated that most of these served as cutting tools, as specimens have a mean edge angle of approximately twenty-five degrees. The remaining eight specimens exhibit relatively steep retouch. A scraping function is postulated as the mean edge angle is approximately seventy degrees. Five specimens have retouch on one edge only; two specimens exhibit retouch on opposing edges; one specimen exhibits retouch on one edge and one end; and five specimens are too fragmentary to determine if ends or edges are represented.

Group 86:a-aa Utilized Flakes - 27

Specimens in this category exhibit utilization in the form of minute flake removal along the flake margin through utilization. The proportion of complete flakes is slightly higher than the previous category. Fifteen specimens are relatively complete, and the remaining twelve specimens are fragmentary. Twenty-three specimens have acute working edges; three have steep working edges; and one specimen has one acute and one steep working edge. Thirteen specimens have one utilized edge; eleven specimens exhibit two opposed utilized edges; one specimen exhibits one edge and one end utilized; and one specimen exhibits only one utilized end. The degree of utilization is relatively light. Only five specimens exhibit substantial flake removal along the edges. The remainder exhibit a considerably lighter degree of utilization.

Ground and Pecked Stone

Group 90:a-h Pecked Stone - 8 (Figure 66, a-f)

These specimens exhibit pecking on one or both faces of the stone. All exhibit central facial pecking which is sometimes of sufficient intensity to identify the area as an actual pit. Five specimens exhibit pecking on one face only; two specimens exhibit pecking on both faces; and one specimen exhibits pecking on one face and the other face is altered in such a way that identification of pecking is not possible. The degree of force is generally not heavy. Only specimen 90:h exhibits an indication of the use of heavy

TABLE 25
Flake Tools
Artifact Measurements and Attributes - 23MC65

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Miscellaneous Worked Chert</u>						
83:a	Sur.	70	53	22	50g	
83:b	Sur.	52	39	15	26g	
83:c	Sur.	59	31	26	30g	
83:d	Sur.	61	27	17	22g	
83:e	Sur.	46	29	15	17g	
83:f	Sur.	36	34	17	28g	
83:g	Sur.	45	20	12	9g	
83:h	Sur.	32	27	9	8g	
83:i	Sur.	28	25	11	7g	
<u>Flake Tools</u>						
<u>Retouched Flakes</u>						
84:a	2331	24	17	5	2g	1 edge
84:b	2011	40	30	18	15g	1 edge
84:c	2301	16*	10*	2*	1g*	1 edge, 1 end
84:d	3013	16*	11	3	1g*	2 edges
84:e	2064	33*	23*	9*	7g*	1 edge
84:f	2302	40	35	4	5g	1 edge
84:g	Sur.	26*	17*	7*	3g*	1 edge
84:h	Sur.	36*	28	8	5g*	2 edges
84:i	Sur.	30*	15*	10*	3g*	1 edge
84:j	Sur.	22*	18*	10*	2g*	1 edge
84:k	Sur.	18*	8*	10*	1g*	1 edge
84:l	Sur.	14*	10*	7*	1g*	1 edge
84:m	2133	85	58	22	89g	1 edge
<u>Utilized Flake</u>						
86:a	2010	46	25	4	4g	2 edges
86:b	2181	35	20	4	3g	2 edges
86:c	2181	30	28	4	3g	2 edges, 1 end
86:d	2012	27	18	2	1g	1 edge
86:e	2333	21	19	13	4g	1 edge
86:f	2377	25*	22	5	3g*	2 edges

TABLE 25 (cont'd)

Flake Tools

Artifact Measurements and Attributes - 24MC65

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
86.g	2013	25	25	5	3g	2 edges
86.h	2013	49	17	3	2g	2 edges
86.i	2014	28	25	3	2g	2 edges
86.j	2015	42	20	4	3g	1 edge
86.k	2015	32 ^o	27	5	5g	2 edges
86.l	2329	28 ^o	28 ^o	3 ^o	1g ^o	1 edge
86.m	2247	26 ^o	25 ^o	5 ^o	2g ^o	1 edge
86.n	2017	27 ^o	23 ^o	6 ^o	3g ^o	1 edge
86.o	2183	48	22	8	7g	1 edge
86.p	2018	21 ^o	21 ^o	3	1g ^o	2 edges
86.q	Sur.	29 ^o	20	8	4g ^o	1 edge
86.r	Sur.	30	19 ^o	9 ^o	5g ^o	1 edge
86.s	Sur.	60	53	20	61g	1 edge, 1 end
86.t	Sur.	60	49	22	50g	1 end
86.u	Sur.	35 ^o	30	13	12g ^o	2 edges
86.v	Sur.	44	23	9	6g	2 edges
86.w	Sur.	30	18 ^o	4	1g ^o	1 edge
86.x	Sur.	42	29	5	5g ^o	2 edges
86.y	Sur.	42	29	5	5g ^o	2 edges
86.z	Sur.	28	23	4	3g	1 edge
86.aa	Sur.	25 ^o	17 ^o	6 ^o	2g ^o	1 edge

TABLE 26

Cores

Artifact Measurements and Attributes - 23MC65

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Cores</u>						
<u>Polyhedral Cores</u>						
77:a	Sur.	61	39	40	82g	
77:b	Sur.	85	79	57	420g	
77:c	Sur.	56	54	35	94g	
77:d	1013	77	56	39	114g	
77:e	Sur.	65	33	30	55g	
77:f	Sur.	61	38	36	49g	
77:g	Sur.	71	30	30	67g	
77:h	Sur.	75	55	37	115g	
77:i	Sur.	57	54	39	113g	
77:j	1005	77	63	62	299g	
77:k	Sur.	53	47	27	64g	
<u>Nuclei</u>						
80:a	Sur.	38	31	21	29g	
80:b	Sur.	48	25	24	22g	
80:c	Sur.	36	22	18	16g	
80:d	Sur.	36	29	20	19g	
80:e	Sur.	26	24	15	10g	
80:f	Sur.	36	22	12	7g	
80:g	Sur.	31	21	12	8g	
80:h	Sur.	20	15	15	4g	

force. Pecked areas are fairly centered on the faces and are generally small and circular. In most cases, the cortex has been pecked away, and the interior color of the stone contrasts sharply with the surrounding cortex color. Two specimens have been fire-cracked and are fragmentary. Four specimens exhibit fairly extensive wear while the other four specimens exhibit a considerably lighter degree of usage.

Group 91:a-n Ground Stone - 14 (Figure 68, a-f)

The specimens in this category exhibit at least one face which has been ground. Sufficient cortex had been removed to reveal the interior color. Most exhibit relatively fine striations which are generally multi-directional. Three specimens exhibit light polish along higher areas on the surfaces, and one specimen exhibits heavy polish. Only three specimens are complete, and only two specimens are relatively complete. The remaining nine specimens are heavily fire-cracked and are not sufficiently complete to determine if there was any other modifications. It is possible that some of these may represent fragments of more complex tools.

Group 92:a-o Battered Stone - 15 (Figure 72, a-f)

The specimens in this category exhibit battering on one or both ends and one or both edges. Three specimens exhibit battering at the break between edge and face and extend slightly up onto the faces. Wear on the specimens is highly variable. Wear ranges from light battering to heavy edge crushing and edge shattering. Ten specimens exhibit moderate to heavy edge crushing, and two specimens exhibit edge shattering. Most of these appear to have been utilized in direct contact with dense materials. The other specimens exhibit evidence of less heavy percussion. Size is the most variable characteristic. Specimens range from small to large. The types of wear are not readily distinguishable between specimens and it is difficult to make any determination of function. Although generally large specimens exhibit heavier wear and evidence heavier degree of force, there are several small specimens in this sample which exhibit heavy wear. It would appear that multiple functions are represented in these specimens. One specimen exhibits battering on one edge; four specimens exhibit battering on one end; one specimen exhibits battering on one end and one edge; one specimen exhibits battering on one end and extends up onto the face; four specimens exhibit battering on the three ends; one specimen exhibits battering on the three ends; one specimen exhibits battering on the two ends and the two edges; one specimen exhibits continuous battering at the juncture of one face and the edges; and one

TABLE 27

Pecked/Ground/Battered Stone
Artifact Measurements and Attributes - 23MC65

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Ground and Pecked Stone</u>						
<u>Pecked Stone</u>						
90:a	2014	107	78	43	467g	Quartzite 1p
90:b	Sur.	79	68	45	238g	Argillite 1p
90:c	Sur.	89	67	44	217g	Felsite 2p
90:d	2412	100	80	42	261g	Quartzite 1p
90:e	Sur.	84*	50*	24*	59g*	Argillite 1p
90:f	2174	82	78	58	271g	Quartzite 1p?
90:g	2297	96	67*	58*	225g*	Argillite 2p
90:h	2419	130	106	51	589g	Glacial Sandstone 1p
<u>Ground Stone</u>						
91:a	Sur.	112	92	56	837g	Argillite 2g
91:b	Sur.	144	116	50	1470g	Diorite 2g
91:c	Sur.	122	100*	49*	762g*	Argillite 1g?
91:d	2245	110*	111*	65*	304g*	Argillite 1g
91:e	Sur.	124	108	56	874g	Argillite 1g
91:f	Sur.	69*	46*	45*	230g*	Granitic Quartzite 1g?
91:g	Sur.	63*	50*	51*	138g*	Argillite 1g?
91:h	Sur.	76*	45*	23*	69g*	Argillite 1g?
91:i	Sur.	69*	64*	17*	58g*	Argillite 1g
91:j	Sur.	63*	46*	37*	131g*	Argillite 1g?
91:k	Sur.	50*	48*	34*	86g*	Felsite 1g?
91:l	Sur.	55*	36*	35*	69g*	Argillite 1g?
91:m	Sur.	68*	51*	29*	81g*	Argillite 2g?
91:n	Sur.	63*	49*	19*	47g*	Argillite 1g?
<u>Battered Stone</u>						
92:a	2018	98	49	40	254g	Felsite 1b, edge
92:b	Sur.	81	60	38	296g	Argillite 1b
92:c	Sur.	73	54	38	205g	Quartzite 1b
92:d	2048	78	50	50	267g	Quartzite 1b
92:e	2369	110	88	32	235g	Argillite 1b
92:f	2414	73	54	40	218g	Quartz 2b
92:g	2037	81*	42*	23*	99g*	Quartzite 2b
92:h	Sur.	62	60	33	204g	Argillite 2b
92:i	Sur.	85	72	44	360g	Argillite 2b
92:j	Sur.	97	70	60	572g	Quartzite 2b
92:k	Sur.	74	53	36	210g	Quartzite 2b
92:l	2236	78	69	34	244g	Argillite 2b
92:m	Sur.	75	64	40	263g	Quartzite 3b
92:n	2271	106	104	49	719g	Silicified Sediments
92:o	Sur.	120	90	60	900g	Argillite cb

specimen exhibits battering on one end and one edge but is fire-cracked in such a way that determination of battering on the other end and edge is impossible.

Group 93:a-f Ground and Pecked Stone - 6 (Figure 69, a-f)

The specimens in this category exhibited one or more faces which have been ground and one or more faces which have been pecked or pitted. Five specimens exhibit two pecked faces and one ground face, and one specimen exhibits one ground and pecked face. Four of the specimens are complete, and two specimens are fire-cracked.

Group 94:a-f Pecked and Battered Stone - 6 (Figure 70, a-f)

The specimens in this category exhibit one or more faces which have been pecked or pitted and one or more ends and/or edges exhibiting battering. The end and edge battering lacks the characteristics of direct contact with dense materials and is similar to that on the pecked faces. There does not appear to be any readily identifiable pattern in the number of faces pecked and the number of ends or edges battered. There is only one specimen each which exhibits one pecked face and one battered end; one pecked face and two battered ends; two pecked faces and one battered end; two pecked faces and two battered ends; two pecked faces, two battered ends, and one battered edge; and two pecked faces, two battered ends, and two battered edges.

Group 95:a Ground and Battered Stone - 1 (Figure 71, a)

This specimen exhibits one ground face and battering around the entire margin of the specimen. The degree of force of the battering does not appear to have been heavy. Battering is densest on the highest points of both ends and one edge, but is fairly continuous around the entire specimen.

Group 96:a-h Ground, Pecked, and Battered Stone - 8
(Figure 71, b-f)

The specimens in this category exhibit one or more ground faces, one or more pecked faces, and one or more battered ends and edges. The type of end and edge battering is generally light and is similar in nature to facial pecking. Specimen 96:d is an exception. This specimen exhibits heavy edge damage, and the edges of the batter marks are crumbled, step fracturing is heavy, and edge shattering is also present. There does not appear to be any recognizable pattern in the number of faces ground or pecked and in the number of edges and ends battered. Almost all

conceivable combinations are present. Areas of battering are generally discrete and not continuous.

Group 97:a-c Chert Core Hammerstones - 1, 2 fragments
(Figure 73, a-c)

The specimens in this category exhibit battering on the edges. All are chert, and differ from the preceding category only in that flake have been removed from the lateral margins or faces. All specimens exhibit cortex on at least one edge or face. Specimen 97:a is the only complete specimen. It exhibits almost continuous wear on the edges. The specimen is roughly spherical, and wear is fairly evenly distributed across the surface of the specimen. Edge wear is characterized by edge crushing on all specimens. None exhibit any appreciable edge grinding and were probably used largely for percussion on dense material.

Group 98:a Heavily Facially Battered Stone - 1
(Figure 67, b)

The specimen in this category is a large cobble with modification of both faces. Both faces exhibit complete cortex removal. It does not appear that the face was ground as the surface of the face is fairly irregular. There are only a few scattered deep peck marks on the surfaces indicative of direct contact with dense materials. Cortex appears rather to have been removed indirectly, as there is no widespread pitting of the surface. It appears rather to have been used as a rest for materials during processing. Continued usage has removed the cortex but did not result in appreciable pitting of the surface.

Group 101:a Ground Sandstone, Small, Flat - 1
(Figure 73, e)

The specimen in this category is local flint hill sandstone. It exhibits one heavily ground face. The surface is slightly broader than most specimens in the group, but is still relatively small and very slightly concave. It appears to have been used to grind the surface of a broad, slightly convex object.

Group 102:a Ground Sandstone, Grooved - 1
(Figure 73, d)

The specimen in this category is also of local flint hill sandstone. It exhibits two, deep V-shaped grooves on one edge parallel to each other and to the longitudinal axis. It appears to have been used to sharpen narrow pointed objects such as awls.

TABLE 28
Modified Stone
Artifact Measurements and Attributes - 23MC65

Cat. No.		Length	Width	Thickness	Weight (gm)	Remarks
<u>Ground and Pecked Stone</u>						
93:a	Sur.	101	79	63	625g	Argillite 2p, 1g
93:b	Sur.	124	79	48	773g	Argillite 2p, 1g
93:c	Sur.	85	78	50	464g	Argillite 2p, 1g
93:d	Sur.	78	70	51	459g	Quartzite 1p, 1g
93:e	Sur.	81*	57*	38*	215g*	Argillite 2p, 1g
93:f	Sur.	66*	56*	29*	157g*	Diorite 2p, 1g
<u>Pecked and Battered Stone</u>						
94:a	2169	102	97	48	778g	Argillite 2p, 4b
94:b	1011	87	64	37	390g	Quartzite 2p, 1b
94:c	1014	82	60	35	376g	Quartzite 2p, 2b
94:d	Sur.	79	66	39	284g	Argillite 1p, 1b
94:e	Sur.	69	60	37	228g	Quartzite 2p, 3b
94:f	Sur.	80	63	52	358g	Quartzite 1p, 2b
<u>Ground and Battered Stone</u>						
95:a	Sur.	139	98	44	954g	Argillite 1g, 4b
<u>Ground, Pecked, and Battered Stone</u>						
96:a	2341	93	73	33	364g	Quartzite 2p, 2g, 4b
96:b	Sur.	102	72	53	669g	Quartzite 2p, 1g, 2b
96:c	Sur.	91	79	40	432g	Argillite 2p, 1g, 4b
96:d	Sur.	89	79	37	605g	Argillite 2p, 2g, 3b
96:e	Sur.	96	75	57	755g	Argillite 2p, 1g, 3b
96:f	Sur.	104	84	36	554g	Argillite 2p, 2g, 2b
96:g	Sur.	94	55	39	394g	Argillite 2p, 1g, 1b
96:h	Sur.	79	65	39	273g	Argillite 1p, 1g, 1b
<u>Chert Hammerstones</u>						
97:a	Sur.	73	65	57	229g	Chert
97:b	Sur.	49*	42*	31*	80g*	Chert
97:c	2246	52*	30*	30*	49g*	Chert
<u>Heavily Facially Battered Stone</u>						
98:a	Sur.	221	135	101	2500g	Gabbro
<u>Ground Sandstone - Small, Flat</u>						
101:a	Sur.	62*	45*	28*	72g*	Flint Hill Sandstone 1SC
<u>Ground Sandstone, Grooved</u>						
102:a	Sur.	109	82	46	360g	Flint Hill Sandstone 2NDG
<u>Multiple-pitted Stone</u>						
109:a	Sur.	262	185	79	1900g	Flint Hill Sandstone 13p
<u>Utilized Fire-cracked Rock</u>						
110:a	2011	58	37	5	23g	Argillite
110:b	Sur.	69*	64*	17	58g*	Argillite

Group 109:a Multiple-pitted Stone - 1 (Figure 67, a)

The specimen in this category exhibits multiple deep pits on both surfaces of the stone. These pits are very deep (up to 15 mm). There are eight deep pits on one face, and five shallower pits on the opposing face. Pits are approximately three centimeters in width. The degree of force appears to be relatively heavy and differs from the preceding category. Although often labeled nutting stones morphologically, the wear in the pits indicates contact with relative dense materials. The nature of the material (sandstone) is less dense than the specimens in the previous category, but this does not appear to be sufficient to account for the difference in the wear.

Group 110:a-b Utilized Fire-cracked Rock -2
(Figure 73, f-g)

The specimens in this category consist of thin fragments of fire-cracked rock which exhibit light modification along the edges. This modification consists of light edge crushing and flake removal through usage. Specimens are thin, and flake removal up the faces is light. The specimens appear to be incidental tools, and were used in a cutting motion.

Hematite

Group 117:a-h Chipped Hematite -14 (Figure 74, g-k)

Four of the specimens in this category exhibit flakes removed bifacially-bilaterally, but none are of sufficient size to be part of a tool shaping process. The remainder of the specimens have from three to eighteen flakes removed, but there is no discernible pattern to removal. Specimens are irregular and do not appear to be part of a tool shaping process.

Group 118:a-c Ground Hematite -3 (Figure 74, a-c)

Specimens have very fine striations which are the result of grinding on a fine-grained abrasive. Most of the specimens are multi-faceted. Only specimen 118:b contains only a single ground face. Striations are largely unidirectional.

Group 119:a-ad Hematite Flakes - 30 (Figure 74, l-o)

Hematite flakes are the result of the process of chipping hematite. The variety of specimens in Group 117 indicates that chipping may occur for a variety of reasons.

TABLE 29
Hematite
Artifact Measurements and Attributes - 23MC65

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Hematite</u>					
<u>Chipped Hematite</u>					
117:a	2269	28	26	11	21g
117:b	2080	46	26	21	35g
117:c	1005	25	18	8	9g
117:d	2010	23	20	10	11g
117:e	2010	11*	8*	7	2g*
117:f	2182	17*	9*	8*	2g*
117:g	2378	15*	13*	12*	3g*
117:h	2016	44	28	9	14g
117:i	Sur.	24	13	14	9g
117:j	Sur.	48	27	9	19g
117:k	Sur.	69	54	10	59g
117:l	Sur.	46	18	16	23g
117:m	Sur.	36	32	10	21g
117:n	Sur.	33	22	10	14g
<u>Ground Hematite</u>					
118:a	1003	35	20	5	8g 5 facets
118:b	Sur.	35	20	6	9g 1 facet
118:c	Sur.	34	19	11	14g 5 facets
<u>Scratched Hematite</u>					
123:a	1012	23	15	7	2g 1 facet
123:b	Sur.	49	29	15	23g 8 facets
123:c	Sur.	30	14	7	4g 1 facet

Most of the flakes exhibit typical percussion characteristics, and most still retain some cortex on exterior surfaces.

Group 123:a-c Scratched Hematite - 3 (Figure 74, d-f)

Specimens have surfaces which have been scratched or shaved with a chipped stone tool. Scratches are not deep and occur in grouped sets. Although the purpose of the modification is unknown, it would appear to have been done to produce pigment.

Ceramics

Pottery - 662

Sample: Three rim sherds, 77 body sherds,
and 582 highly eroded sherds.

Group 126

Ceramics One: Sand-tempered to sand and grit tempered,
smooth or cordmarked body.

Paste:

Temper: Round, sand-sized particles, mainly quartz but with some plagioclase. Some sherds exhibit small amounts of crushed granite or temper. As texture, color, and surface treatment are not substantially different, they have not been separated out. Particles are generally small (.1 to 1 mm.) but a few are large (up to 5 mm).

Texture: Paste ranges from friable to highly compact. In less compact sherds lamination tends to occur parallel to the interior-exterior surfaces. More compact sherds exhibit less visible lamination. Sherds break irregularly.

Color: Color is highly variable, ranging from reddish yellow (5YR7/8) through red (2.5YR5/4).

Darker shades include light brownish gray (10YR6/2) to dark reddish gray (10YR4/1), dark gray (5YR4/1), and black (5YR2/1).

Method of Manufacture: The probability is high that vessels were lump modeled, as there are no straight breaks indicative of coiling and finger marks on interiors are abundant. Specimens exhibit the use of a paddle on the exterior, as temper has been compressed. Exteriors often tend to exfoliate as a unit, and particle sizes are often smaller near the exteriors. An anvil was not apparently utilized.

Surface Finish: Cordmarking appears on the exterior of nineteen sherds, three sherds have cordmarked exteriors which were subsequently partially smoothed, and fifty-eight sherds have smoothed exteriors.

Decoration:

Lip: Three rim sherds all have plain, rounded lips.

Rim: Rims are plain and outward flaring from the lip toward the neck on two sherds. One rim sherd exhibits a row of bosses approximately eighteen millimeters below the lip.

Body: Two body sherds from the same vessel exhibit four very faint incised lines. The remainder of these specimens have no decorations.

Form:

Lip: Flat to slightly rounded.

Rim: Rims are outward flaring from rim to neck. One rim-neck sherd has a sharply outflaring rim-neck juncture.

Neck: Neck appears generally to be only slightly outward flaring. The single detectable rim-neck sherd has a sharply outflaring (almost flat) neck.

Body: Undetermined.

Group 133:a-at Burned Clay - 46

The specimens in this category are clay which had been fired intentionally or unintentionally. They differ from pottery in that they lack temper. All specimens are eroded and highly irregular in shape.

Lithic Waste

Group 134: Chert Waste - 2,001

A total of 1,209 unmodified chert flakes and 355 pieces of unmodified chert shatter were recovered from the excavations. Surface material included 375 unmodified chert flakes and 62 pieces of unmodified chert shatter.

Group 135: Quartzite Waste - 6

A total of five unmodified quartzite flakes were recovered from the excavations, and one unmodified quartzite flake was recovered from the surface.

Group 136: Quartz Waste - 8

A total of five unmodified quartz flakes and one unmodified piece of quartzite shatter were recovered from the excavations. Two additional quartz flakes were recovered from the surface.

Group 137: Silicified Sediments Waste - 11

A total of six unmodified silicified sediments flakes and four unmodified pieces of silicified sediments shatter were recovered from the excavations. One unmodified silicified sediment flake was recovered from the surface.

Group 139: Argillite Waste - 2

Two unmodified argillite flakes were recovered from the excavations.

Group 140: Chert Flake with Gloss - 1

A single chert flake exhibits gloss (Sonnenfeld 1963). Gloss occurs on the dorsal flake surface only. Wear on the dorsal face is not heavy, and there is little or no rounding of flake scar ridges in conjunction with the accumulation of gloss on the surface.

Group 141: Fire-cracked Rock - 14,845

Fire-cracked rock is the term used for thermally altered stone. A total of 13,591 specimens were recovered from the excavations, and 1,254 specimens were recovered from the surface.

Group 142: Unmodified Stone - 5,516

The specimens in this category lack any observable intentional or unintentional cultural modification. These include largely residual materials which appear to have been unintentionally transported to the site.

Historic

Group 144: Historic - 2

Two cinders were removed from the excavations. The two specimens come from the plow zone and do not indicate any major disturbance of deposits.

TABLE 30

DISTRIBUTIONAL SUMMARY - 23MC65

		7	12	13	14	15	19	20	24	29	33	34	45	46	47	48	49	51	54	55	61	62	63	66	69
Xu1000	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu1002	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2001	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2002	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2003	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2004	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2005	L.1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2006	L.1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2007	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2008	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Xu2009	L.1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface		1	1	1	1	2	-	1	1	-	3	1	4	2	12	5	6	1	6	1	1	1	3	1	1

TABLE 30 (cont'd)
DISTRIBUTIONAL SUMMARY - 23MC65

		70	71	75	76	77	78	80	83	84	86	90	91	92	93	94	95	96	97	98	101	102	109	110
Xu1000	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu1002	L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Xu2001	L.1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2002	L.1	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	L.2	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2003	L.1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Xu2004	L.1	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	1	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2005	L.1	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2006	L.1	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2007	L.1	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu2008	L.1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Xu2009	L.1	-	-	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
	L.2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface		1	1	31	22	9	12	8	9	6	11	3	13	8	6	3	1	7	2	1	1	1	1	1

TABLE 30 (cont'd)

DISTRIBUTIONAL SUMMARY - 23MC65

		117	118	119	123	126	133	134	135	136	137	139	140	141	142	144
Xu1000	L.1	-	-	-	-	8	-	275	-	-	-	-	-	352	143	-
	L.2	1	-	-	-	-	-	225	-	1	-	-	-	314	93	-
	L.3	-	-	1	-	-	-	25	-	-	-	-	-	31	5	-
Xu1002	L.1	-	1	-	-	29	3	129	-	-	-	-	-	556	279	-
	L.2	-	-	1	-	18	1	187	-	-	-	-	-	743	342	-
	L.3	-	-	-	1	1	-	62	-	-	-	-	-	185	86	-
Xu2001	L.1	2	-	-	-	31	1	87	2	-	2	-	-	581	263	-
	L.2	-	-	1	-	12	-	92	-	-	2	-	-	764	200	-
	L.3	-	-	-	-	-	-	14	-	-	-	-	-	89	32	-
Xu2002	L.1	-	-	2	-	38	1	79	-	-	-	-	-	510	222	-
	L.2	1	-	-	-	39	1	72	1	-	-	-	-	627	162	-
	L.3	-	-	-	-	2	-	11	-	-	-	-	-	64	23	-
Xu2003	L.1	-	-	1	-	52	6	83	-	1	-	1	-	598	264	1
	L.2	-	-	1	-	29	4	82	-	2	-	-	-	588	176	-
	L.3	-	-	1	-	10	-	29	-	-	-	-	-	196	50	-
Xu2004	L.1	-	-	-	-	35	1	153	-	-	1	-	-	816	461	-
	L.2	1	-	4	-	18	1	43	-	-	2	-	1	440	168	-
	L.3	-	-	1	-	3	-	7	-	-	-	-	-	38	12	-
Xu2005	L.1	-	-	3	-	36	-	85	-	-	-	-	-	636	349	-
	L.2	1	-	1	-	7	2	55	-	-	-	-	-	585	166	-
	L.3	-	-	-	-	1	-	4	-	-	-	-	-	22	3	-
Xu2006	L.1	-	-	-	-	33	5	104	-	-	-	1	-	741	255	-
	L.2	1	-	1	-	31	4	68	-	-	-	-	-	651	133	-
	L.3	-	-	-	-	-	-	1	-	-	-	-	-	26	3	-
Xu2007	L.1	1	-	1	-	35	2	113	-	-	3	-	-	577	373	-
	L.2	-	-	1	-	13	1	62	1	-	-	-	-	438	258	-
	L.3	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Xu2008	L.1	-	-	3	-	31	-	102	-	2	-	-	-	683	383	1
	L.2	-	-	1	-	15	1	92	-	-	-	-	-	521	238	-
	L.3	-	-	-	-	-	-	13	-	-	-	-	-	48	24	-
Xu2009	L.1	-	-	4	-	23	1	69	-	-	-	-	-	631	194	-
	L.2	-	-	1	-	10	1	49	-	1	-	-	-	562	96	-
	L.3	-	-	-	-	2	-	-	-	-	-	-	-	9	11	-
Surface		6	2	1	2	101	-	437	2	2	1	-	-	1254	57	-

The Site Assemblage: 23MC65

The specimens in Group 15 are similar to the type Dalton Serrated (Chapman 1975:245). Dalton points are common throughout much of central and southern Missouri. The specimens in this category lack, however, the straight stem margins more characteristic of the type. They are more similar to points from 23FR7 and 23FR3 (Chapman 1975:Fig. 4-16, b-d; Fig. 4-18, b-d). Concave basal margins do occur in the type definition. Dalton points occur in the lowest component of Graham Cave (Logan 1952:27-30; and Klippel 1971:21; Fig. 10) and at Arnold Research Cave (Shinnep 1966). Open sites with Dalton-like materials include the Walters site (Biggs et al. 1970:Fig. 9) and the Dalton site (Chapman 1975:135-136). A radiocarbon date on the lowest level of the Pigeon Roost Creek site was 8500 $\pm$ 220 B.P. (O'Brien and Warren 1979:234).

- This level included Dalton materials. Dates on the Dalton component at Graham Cave dated by Chapman (1957:47) ranged from 8830 $\pm$ 500 B.P. from the Zone III - Zone IV contact to 9700 $\pm$ 500 B.P. in Zone IV. Klippel's (1971:22) dates ranged from 9290 $\pm$ 300 B.P. to 9470 $\pm$ 400 B.P. Dates on the Dalton component at Rodgers Shelter ranged from 10,200 $\pm$ 330 B.P. to 10,530 $\pm$ 650 B.P. (McMillan 1971:81). The number of dates between 8000 and 7000 B.C. led Chapman (1975) to propose a Dalton period falling within the range of those dates. Dalton points appear to occur from ca. 8000 B.C. to as late as 5000 B.C. The point type is present in both Dalton and Early Archaic periods.

The projectile point in Group 12 is a common type throughout the Prairie Peninsula. It appears to fit well within the general forms which are part of the Big Sandy Complex as defined by Lewis and Kneberg (1959). Concave-based forms occur throughout Missouri and are reported from Arnold Research Cave, the White River Complex, Graham Cave, and Hidden Valley Shelter (Chapman 1975:Fig. 6014, a; Fig. 7-6, a-b; Fig. 7-14, e-h; and Fig. 7-16, c-d). They occur throughout northern Missouri in surface collections (Chomko and Griffin 1975: Fig. 5, b; Eichenberger 1944: Pl. I, row 5; Henning 1961:173-174; Fig. 26, SN-4, SN-5; and Shields 1956b:118, 124) and from excavated sites such as Graham Cave (Logan 1952:30; Pl. V, h-j; Klippel 1971:26) and the Collins site (Klippel 1972:13; Fig. 13, 3a-3n). Forms belonging to the Big Sandy Complex appear to be dominant throughout the Middle Archaic period in central Missouri but occur in Early Archaic contexts as well, such as the Dalton site (Chapman 1975:136; Fig. 6-6, b). Radiocarbon dates from the Middle Archaic levels at the Pigeon Roost Creek site in Cannon reservoir average 3960 $\pm$

168 B.C. for the upper cluster and a mean date of 4394 ± 92 B.C. for the lower cluster (O'Brien and Warren 1979). Both this level and a lower undated level separated by sterile soil contained only Big Sandy complex points. Although the lower level was postulated as being Middle Archaic as well, it is possible that it represents an Early Archaic component. Side-notched forms appear throughout the Archaic in Iowa from 8500 - 4500 B.P. and led Anderson and Shutler (1974) to propose a "Prairie Archaic" period which is characterized by side-notched forms. It appears that Anderson and Shutler's (1974) proposed "Prairie Archaic" may be present throughout much of northern Missouri for the Early/Middle Archaic periods.

The specimen in Group 24 is difficult to compare with other materials in other areas as little comparable material was found. The closest comparable material occurs in southern Missouri. Marshall (1963:5) notes that this and related forms are similar in some respects to Rice Lobed and notes that ground bases and stems along with beveled blades occurred on this form as well as on Rice Lobed. The specimen in this category lacks the above characteristics. It fits well with some of the specimens in Category 1 from Rodgers Shelter (Ahler 1971:40-41; Pl. 1, li). Specimens come from Stratum 2, bracketed by radiocarbon dates of 6300 ± 590 B.P. near the upper boundary and 7490 ± 170 to 8100 ± 140 B.P. near the lower boundary (Ahler 1971:6). This is insufficient data for determining where the specimen belongs, but it would appear to date from the Archaic.

The specimen in Group 7 is also somewhat difficult to compare with other materials. The specimen is not unlike the type Jakie Stemmed (Chapman 1975:250-251). Specimens were recovered from Table Rock reservoir (Chapman and Marshall 1960:45-47), from Rodgers Shelter (Ahler 1971:13) and from the Middle Archaic levels of Graham Cave (Chapman 1975:Fig. 7-14, d). The specimen exhibits the typically slightly serrated blade margins resulting from distinct parallel-oblique flake scars. It also exhibits typical beveling of the blade margins. Jakie Stemmed appears to be dominant in Middle Archaic contexts in southern Missouri (Chapman 1975).

The specimen in Group 34 is closest to the type Norton in Illinois (White 1969:179) except for the slightly narrower notches. The type does not appear to be common on any of the Middle Woodland sites in the Kansas City area (cf. Shippee 1967; Bell 1976). Reeder (1978:Pl. 3, j) illustrates somewhat comparable material from the Sohn site in the Kansas City area. The type is also rare in the Big Bend and lower Lamine River localities (Kay 1975). The type

appears more commonly in northeastern Missouri and in Illinois.

The specimen in Group 13 is very similar to the type Rice Side-notched (Chapman 1980:311-312). Rice Side-notched is an expanding-stemmed form with very broad, shallow side notches with straight to slightly concave bases. The type occurs in southwest Missouri (Chomko 1976:136; Wood 1961: Cat. Y; Roper 1977: 53; Bray 1956:17) and appear invariably to be associated with ceramic contexts. In the Truman reservoir area, Wood and McMillan (1969:17) suggested a temporal range of ca. A.D. 500 to 1200. Similar points were recovered from Cannon reservoir (Henning 1961:175) and suggested a Late Woodland chronological assignment. Chapman (1980:311) suggests that the type may have appeared as early as the Late Archaic but is more characteristic of the Woodland period. They were apparently still used in the Mississippian period (Chapman 1980).

The specimen in Group 29 is to be closest to the type Marshall (White 1968:9), although the length to width ratio is slightly smaller on this specimen. Similar materials occur in Cannon reservoir (Henning 1961:139) and appear to have Woodland contexts. Similar materials are reported at the Shields site (Shippee 1967:33: Fig. 21, D) and have late Middle Woodland contexts. Marshall occurs in Middle Woodland contexts in the Illinois River valley (White 1968). They also occur as part of the Middle Woodland component at the Sohn site (Reeder 1978:Pl. 3, j-k). The type appears to be common in Middle Woodland contexts in northern Missouri.

The specimens in Group 33 fit well with White's (1968) subtriangular varieties. They are to be intermediate between Norton corner-notched or Manker Notched (White 1968:71) and later Koster Corner-notched (Perino 1971a:100). The specimens are larger than the type Koster Corner-notched, but the method of manufacture and the blank material is similar. The larger Norton and Manker Notched points have generally passed through a preform stage and exhibit primary and secondary flaking. Thus, these specimens are not only intermediate in size but also in manufacture. It is felt that these materials fit well morphologically with White's (1968) subtriangular varieties and that her chronological estimate of late Middle Woodland to early Late Woodland is probably correct for the specimens in this category.

The specimens in Group 19 are similar to the type Madison (Scully 1951:14) to the east and Fresno to the west (Bell 1960:44-45). Bell estimated their age to be about A.D. 800 or 900 to about A.D. 1600. The type is found

throughout Missouri in late contexts. These points are generally associated with shell tempered pottery (Vehik 1974:102) in southwest Missouri. At Vista Shelter (Wood 1961:97, 127; Fig. 23, m) shell tempered ceramics similar in paste, finish, and design elements to those at Steed-Kisker (Wedel 1943) were noted. In the Kansas City area, the Steed-Kisker site (Wedel 1943:52; and Shippee 1972:Fig. 12, q) yielded similar points. Date of A.D. 860 $\pm$ 110 to A.D. 1230 $\pm$ 100 were obtained from House 3 at the Steed-Kisker site (Shippee 1972:7). Excavations in the Smithville reservoir at two Steed-Kisker sites (Calabrese 1969:95-96; Fig. 2, a-b) yielded dates of A.D. 760 $\pm$ 80, A.D. 970 $\pm$ 90, A.D. 1050 $\pm$ 90, and A.D. 1100 $\pm$ 110 from 23CL113 and a date of A.D. 780 $\pm$ 150 from 23CL118. Similar material from surface sites in the area are common (cf. Shippee 1967:Fig. 35, o; Fig. 40, o; and Heffner and Martin 1976:Fig. 1, a-c; Fig. 2, g). Similar points associated with Oneota shell tempered ceramics are common (Henning 1970) throughout central Missouri.

The specimen in Group 20 is similar in morphology to the type Washita as defined by Bell (1958:98-99). This type does not appear on Oneota sites but is common on Mississippian sites in Illinois (Perino 1971a:129; Fig. 59, a, g) as well as in southwestern Missouri (Wood 1961:Fig. 7, p; Fig. 17, j; Roper 1977:Pl. 2, i; and Bray 1963:Fig. 27, a) and in the Kansas City area (Wedel 1943:52, Cat. NBal; Calabrese 1969:Fig. 2, c; Pl. 4, m; and Shippee 1972:Fig. 12, q; Fig. 16, n-o; Fig. 18, m). They also appear in surface collections in northeastern Missouri (Eichenberger 1956:Fig. 4, 41).

Comparisons with the specimen in Group 14 are probably not well made due to the highly reworked condition of the specimen. It is possible that the specimen in this category is related to Rice Lobed but differs significantly from the type definition (Chapman 1975:254). The specimen is somewhat similar to that illustrated by Marshall (1963:5; Fig. 3). Somewhat similar materials is also reported by Roper (1977:Pl. I, c-d). Two of the three lobed points not classified as Rice Lobed came from sites with other Archaic forms (Roper 1977:46). The specimen may also be distantly related to Big Sandy Notched points (Chapman 1975:242). Lobate based forms were recovered from Graham Cave (Chapman 1952:Fig. 9, F) and are included in the type definition. Both of these types are most common in Middle Archaic contexts (Chapman 1975).

Comparisons with the specimens in Group 45 must be made cautiously as only the basal fragments remain. There is, in general, an insufficient amount of the specimens remaining

to make good comparisons. Specimens 45:a and 45:b are similar to the type Snyders Notched (Scully 1951:88). Materials similar to Snyders Notched include a variety of corner-notched specimens from surface collections in northern Missouri (Chomko and Griffin 1975:Fig. 3, a; Vehik 1971:Fig. 3, k; Henning 1961:140, 174; Shields 1966b:115, Fig. 20; and Eichenberger 1944). In the Kansas City area, they appear to be most characteristic of the Middle Woodland period (Shippee 1967). In the Illinois River valley, White (1968) indicates that they are most characteristic of early to middle Middle Woodland.

Specimens 45:c and 45:d cannot be compared as easily without the specimens being more complete. Specimens are similar to Norton Corner-notched (White 1968). Norton Notched has Middle Woodland contexts in the Illinois River valley (White 1968:179). Norton occurs uncommonly at the Sohn site (Reeder 1978). Norton and Steuben Stemmed occur commonly at the Renner site (Shippee 1967:56; Fig. 35) and at the Deister site (Shippee 1967:76; Fig. 45). It would ostensibly appear that these are part of a Middle Woodland assemblage. However, narrow corner-notched points have been recovered from Archaic contexts in southwestern Missouri (cf. Ahler 1971). In northern Missouri, these occur atypically, but without a considerably larger amount of the points present any chronological assignment would be tenuous.

Specimen 45:e appears to be a side-notched, straight-based form. Side-notched, straight-based forms are particularly common in northern Missouri (cf. Group 11 from 23MC56). They appear to be common in Early/Middle Archaic contexts and are the most characteristic type of the period.

Specimens 45:f and 45:g are similar to the type Koster Corner-notched (Perino 1971a:100). Perino estimated that the type occurred no earlier than A.D. 600 or 650 and lasted to approximately A.D. 900. The form appears to be common in Illinois (Perino 1973:166) and northeastern Missouri (Eichenberger 1939; Eichenberger 1944: Pl. III; Eichenberger 1956:Fig. 4; Henning 1961:139, 175; and Hunt 1976). Some related material may occur further west (Weichman 1976a:Pl. 3, a; Vehik 1971:Fig. 2, a; and Shippee 1967:Fig. 35, a; Fig. 40, k-l; and Fig. 45, f). The type almost certainly post-dates Middle Woodland and probably early Late Woodland as well. Perino's (1971a) estimate appears to be essentially correct.

Thus, the projectile points indicate that there are several components on the site. The points in Group 15 tend to indicate that a Dalton or Early Archaic component is

present on the site. However, both of these points were recovered from the surface near the northwestern edge of the site. This part of the site contains some of the deeper deposits on the site, and their presence on the surface does not appear to be a valid proposition of a Dalton component or even potentially an Early Archaic component. The points in Groups 7, 12, and 24 and possibly specimen 45:e indicate that an Early/Middle Archaic component is present. The points in Group 29 and 34 as well as specimens 45:a and 45:b indicate a Middle Woodland component on the site. The specimens in Group 33 indicate a late Middle Woodland or early Late Woodland component on the site. The relative size of these points as well as the method of manufacture would tend to indicate that the latter would be more likely. Specimens 45:f and 45:g tend to indicate a Late Woodland component. The specimens in Group 19 tend to indicate an Oneota or Mississippian component, and the specimen in Group 20 appears to be more characteristic of Mississippian occupations to the east. Previous excavations on the site also recovered evidence of Early/Middle Archaic materials, but those specimens were recovered from the plowzone. Specimens indicative of that time period from these excavations come from the surface. It is thus questionable that such a component exists on the site. It appeared in the previous excavations that a Middle Woodland component was present (Grantham 1979:125). Late Middle Woodland to early Late Woodland points were also recovered from those excavations. Late Woodland micro-points were recovered as well as evidence of a Mississippian occupation.

The relative stratigraphy from the earlier excavations was complex although deposits were relatively stratified (Grantham 1979). Points from this season's excavations were sparse and did not give a good indication of relative stratigraphy. A single basal fragment which appears to be part of the Middle Woodland assemblage was recovered from below plowzone contexts. Middle Woodland, Late Woodland, and Mississippian point types were recovered from the plowzone of the excavations. It would thus appear that the relative stratigraphy in this year's excavations was identical to the previous excavations on the site.

The number of projectile point fragments is not particularly informative. The number of distal point fragments is only slightly lower than the number of proximal and medial point fragments. The number of projectile points does give a good indication of the relative importance of hunting in the economy. The flake scraper in Group 51 indicates that scraping activities occurred, but the relative incidence is very low. The drill-like implements in Groups 54 and 55 indicate another activity on the site.

The specimens often exhibit little or no wear on the distal ends and little can be said of the associated activities based on wear. It is generally assumed that these specimens were used as drills or reamers. Their number is relatively high given the number of chert artifacts recovered and compared to other sites in the area. They are still relatively low in light of the total number of tools. All of the specimens recovered in the excavation block came from below plowzone contexts.

Bifaces are relatively common on the site. The specimen in Group 61 is a large, carefully trimmed thin biface. Although light wear may be present on the proximal end, the specimen has not been carefully edge trimmed around the entire outer margin. It would appear that the specimen is a preform for another tool, and that wear is an ancillary modification. The specimens in Group 63 are highly variable. Specimen 63:a appears not to have been completed. It exhibits little or no observable wear and was probably a preform for another tool. Specimens 63:b and 63:c were completed tools, and both exhibit edge wear. Both exhibit wear on the proximal ends in the form of edge crushing, and they were utilized in a scraping or short chopping motion. The specimens in Group 62 exhibit similar wear to the previous specimens in Group 63. Wear in the form of slight edge crushing occurs on the proximal end, and the specimen was utilized in a scraping motion. The specimens in Group 68, 69, 70 and 71 lack any observable wear and may have been preforms for other tools. The large number of miscellaneous biface fragments (Groups 75 and 76) as well as the fragmentary nature of almost all chert tools illustrates a long use-life and heavy reuse of tools until too fragmentary to be useable. Numerous fragments exhibit attempts to repair or rework the specimens. Attempts to work even small and blocky chert can be seen in the miscellaneous worked chert (Group 83).

Flake tools (Groups 84 and 86) are not numerous when compared with the larger number of other tools and the greater number of such incidental tools common in other areas. The number of flake tools from the site is, however, relatively higher than most of the sites in the area. Also differing from other sites in the area, eight of the thirteen specimens with retouch exhibit steep retouch and indicates that scraping activities were dominant. Utilized flakes indicate that cutting activities were dominant in non-retouched flake tools. It appears that the relatively small number of incidental flake tools is the result of the relatively small size of the chert waste. In general, most of the chert flakes larger than one-half inch in size have been utilized or retouched.

The presence of chert cores (Groups 77, 78, and 80) indicates the use of local sources of raw materials. The number of these is relatively low and indicates that little reliance was placed on local materials. The amount of chert waste, quartzite waste, quartz waste, and silicified sediments waste is fairly high for sites in the area. The use of the latter three types of stone also indicates the use of local materials. Chert flakes are generally small and are characterized by a preponderance of bifacial thinning, trimming, and retouch flakes. Sixty to sixty-five percent of the chert waste has a non-local origin.

The most outstanding aspect of the total tool assemblage is the large number of ground and pecked stone tools. Sixty-one percent of the total morphologically recognizable tools belong to this class. Groups 90, 91, 93-96, and 109 appear to be tools connected with plant processing. Some of the specimens have been utilized for other functions as well. Some wear is heavier and more indicative of direct contact with dense materials, but the principal modifications appear to be connected with plant processing. Group 92 appears to be a multifunctional category. Size, shape, and degree of edge damage vary considerably. Edge wear grades from light to heavy with heavier edge damage usually occurring on larger specimens. A number of specimens exhibit wear characterized by light edge crushing and exhibit wear similar to that on the faces of specimens in Group 90. Some of the specimens may be part of plant processing as well. The specimens in Group 97 are chert cores which were subsequently utilized as hammerstones. All of the specimens exhibit wear heavier in nature than the preceding category. Specimens exhibit a heavier degree of edge shattering and have been utilized in direct contact with dense materials. The specimens may have been part of the chert reduction process.

The specimen in Group 98 is of unknown function. While the specimen lacks any indication of use in direct contact with dense materials, the larger size of the specimen makes it significantly different from the other pecked stone. The specimen exhibits complete cortex removal on two faces, and appears to have been utilized as a rest on which some form of non-dense material was processed. The specimens in Groups 101 and 102 indicate at least two functions. Specimen 102:a exhibits V-shaped grooves on the surface and resulted from sharpening small, narrow objects (e.g. awls). Specimen 101:a exhibits a large, smooth, slightly concave face and appears to have been utilized to smooth the surface of a large object. The specimens in Group 110 represent incidental tools much the same as utilized flakes. Specimens were not intentionally modified prior to

utilization. Specimens are relatively thin and exhibit relatively light edge damage. These were utilized in a cutting motion.

Hematite was altered for a variety of purposes. The specimens in Groups 118 and 123 appear to have been scratched or ground for pigment. Four specimens in Group 117 have been flaked bifacially-bilaterally but none are of sufficient size to have been part of a tool-shaping process. The remainder of the specimens are irregularly flaked, and the reason for the modification is unknown. Hematite flakes in Group 119 have been removed as part of a tool-shaping process, in an attempt to shape specimens, or simply for cortex removal. The remainder of the specimens are either unintentionally modified or are not modified.

The ceramics in Group 126 are very consistent, and occur on at a number of sites in the area (cf. Grantham 1979). The paste, temper, and surface finish appear to be most similar to Weaver wares. The plain rim sherds and punch and boss decoration are typical of the early portion of the Weaver ware sequence. Plain rim sherds are not rare on Weaver wares to the east, and appear commonly in Cannon reservoir (cf. Hunt 1976; O'Brien and Warren 1979). Based on the ratio of smoothed to cordmarked exteriors, it would appear that a late Middle Woodland to very early Late Woodland period is represented due to the high percentage of smoothed exteriors. This may be an artifact of mixing ceramics, but the sample size would tend to indicate that this is not true.

As with the earlier excavations on the site, the ratio of ground and pecked stone to projectile points is similar. The ratio of ground and pecked stone should give us an idea of the relative importance of hunting to plant processing. A comparison of below plowzone artifacts gives us a 15:1 ratio of ground and pecked stone to projectile points. This is even higher than the 12:1 ratio derived from the earlier excavations on the site. This indicates that plant processing was the main activity on the site and far outweighs hunting. On the other hand, a comparison of materials from the plowzone yields a ratio of 1:2 for ground and pecked stone to projectile points, indicating that hunting was dominant. This is considerably lower than the 1:18 ratio obtained from the earlier excavations. This appears to be an artifact of the near absence of Mississippian materials from the plowzone, while the earlier excavations exhibited a heavy Mississippian occupation in the plowzone. The plowzone artifacts in this season's excavations are dominated by Late Woodland materials.

Fire-cracked rock is the largest category of culturally altered materials. The amount of this material is considerably higher than on most sites in the area. The fire-cracked rock may not be compared with modern samples from the river as no samples were available in the site vicinity. The percentages of the stone types matches closely what we would project from samples to the north and south of the site area in the river. Except for the obvious selection of stone types for tools, there would be little or no cultural selectivity of stone for use as heat-retaining material.

Feature 5 appears to have been utilized for cooking. The feature has a broad, shallow, basin shape with a large amount of wood charcoal and ash. The feature contained a large amount of fire-cracked rock as well. The feature was quickly filled over, and it does appear to have had the contents removed. The feature has a similar configuration to Feature 5 from 23MC55 except that the amount of fire-cracked rock is lower. The wood charcoal represents large pieces of wood, and ash and charcoal are present only at the base of the feature. The size of the pit is, however, similar to Feature 5 at 23MC55. The feature here lacks the construction details (i.e. organics above the fire-cracked rock and a domed surface) but resembles it in other details. The feature was opened after cooking was complete. The nature of the material being cooked is unknown. The feature is surrounded by a large number of ground and pecked stone tools and was the focus of activities in the area.

In summary, the site appears to have several components. While the points indicate an Early/Middle Archaic component on the site, none of these were recovered in their correct stratigraphic position in excavations. Earlier excavations observed the same phenomenon (Grantham 1979). It appears that some of these artifacts may represent recycled artifacts from other sites and that their absence from the excavations in below plowzone contexts is not sufficient to postulate the presence of such a component. There is also a Middle Woodland component on the site. Points in Groups 29 and 34 and some of the specimens in Group 45 belong to this component. The Middle Woodland component on the site appears to be a relatively long one, and many of the other artifacts belong to this component. Based on the level of pit origin, Feature 5 may belong to the Middle or late Middle Woodland occupation. Points in Groups 13 and 33 and specimens 45:f and 45:g indicate a late Middle Woodland through early Late Woodland occupation. The ceramics appear to represent a late Middle Woodland occupation as well. The specimens in Groups 19 and 20

represent a Mississippian period occupation. The Middle Woodland occupation is similar to earlier sites with a preponderance of tools indicative of plant processing. The ratio of plant processing tools to projectile points is higher on this site than on any other in the area. The Late Woodland occupation is characterized by a heavier reliance on hunting. It appears that this shift occurred at the beginning of or more probably during the Late Woodland period. Earlier excavations on the site tend to indicate that the Mississippian occupation is relatively small and located along the highest part of the site in the northwestern edge (Grantham 1979). Mississippian points in these excavations are not numerous as they were in the previous excavations. The ratio of ground and pecked stone to projectile points in the earlier excavations indicate that hunting was almost exclusively practiced during this period, and the small, areally bounded Mississippian occupation represents a small late hunting camp.

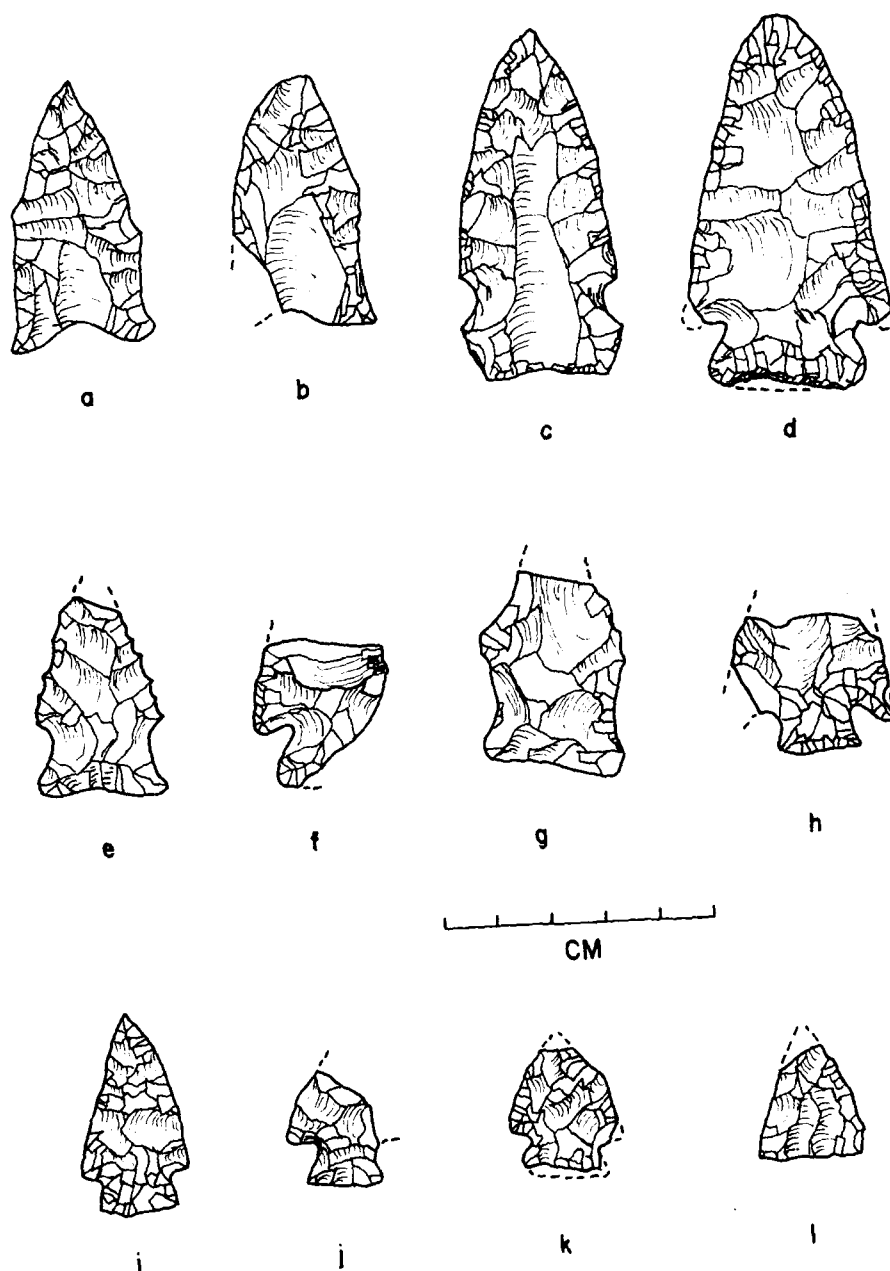


Figure 62. 23MC65. Artifacts. Projectile Points.
 (a-b) Group 15, (c) Group 12, (d) Group 24,
 (e) Group 7, (f) Group 34, (g) Group 13, (h)
 Group 29, (i-k) Group 33, (l) Group 19.

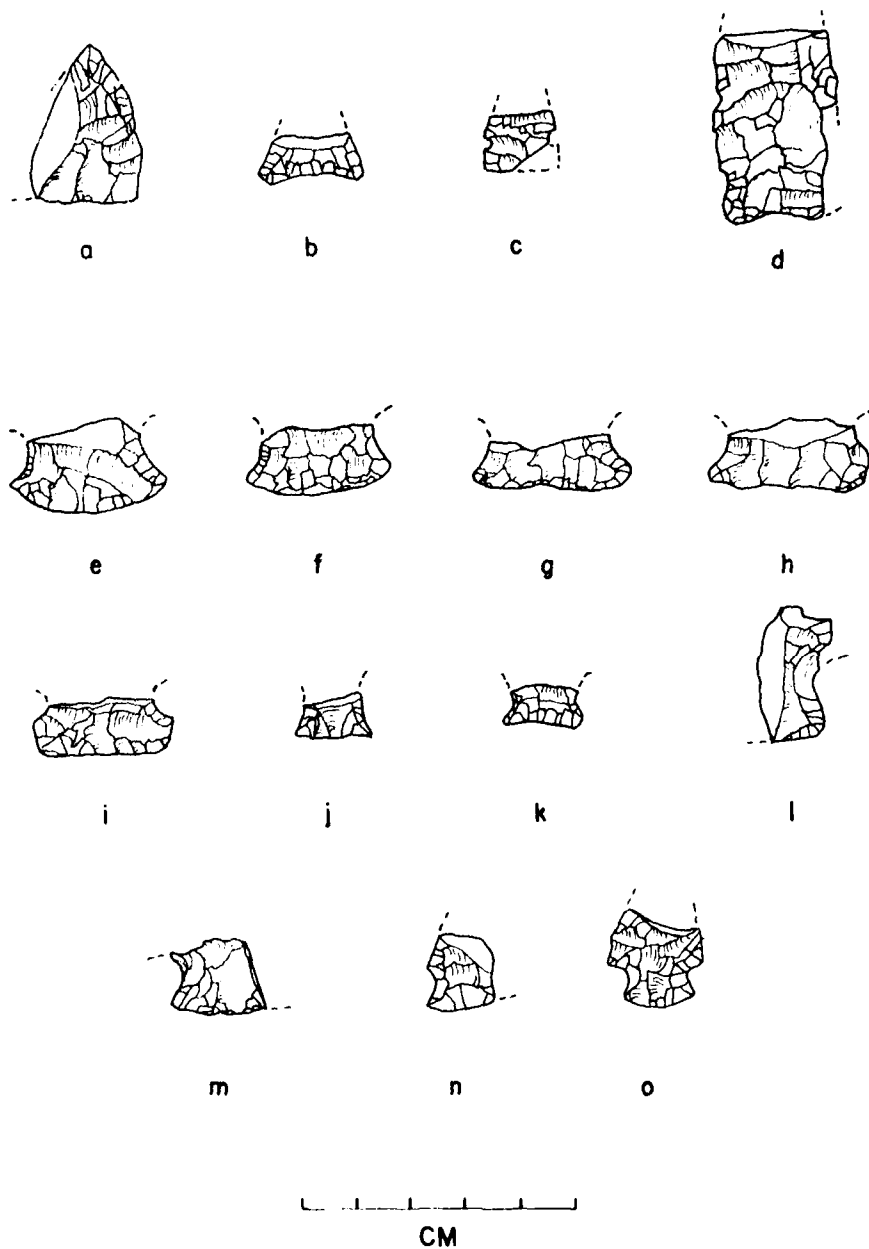


Figure 63. 23MC65. Artifacts. Projectile Points.
 (a-b) Group 19, (c) Group 20, (d) Group 14,
 (e-k) Group 45, (l-m) Group 46.

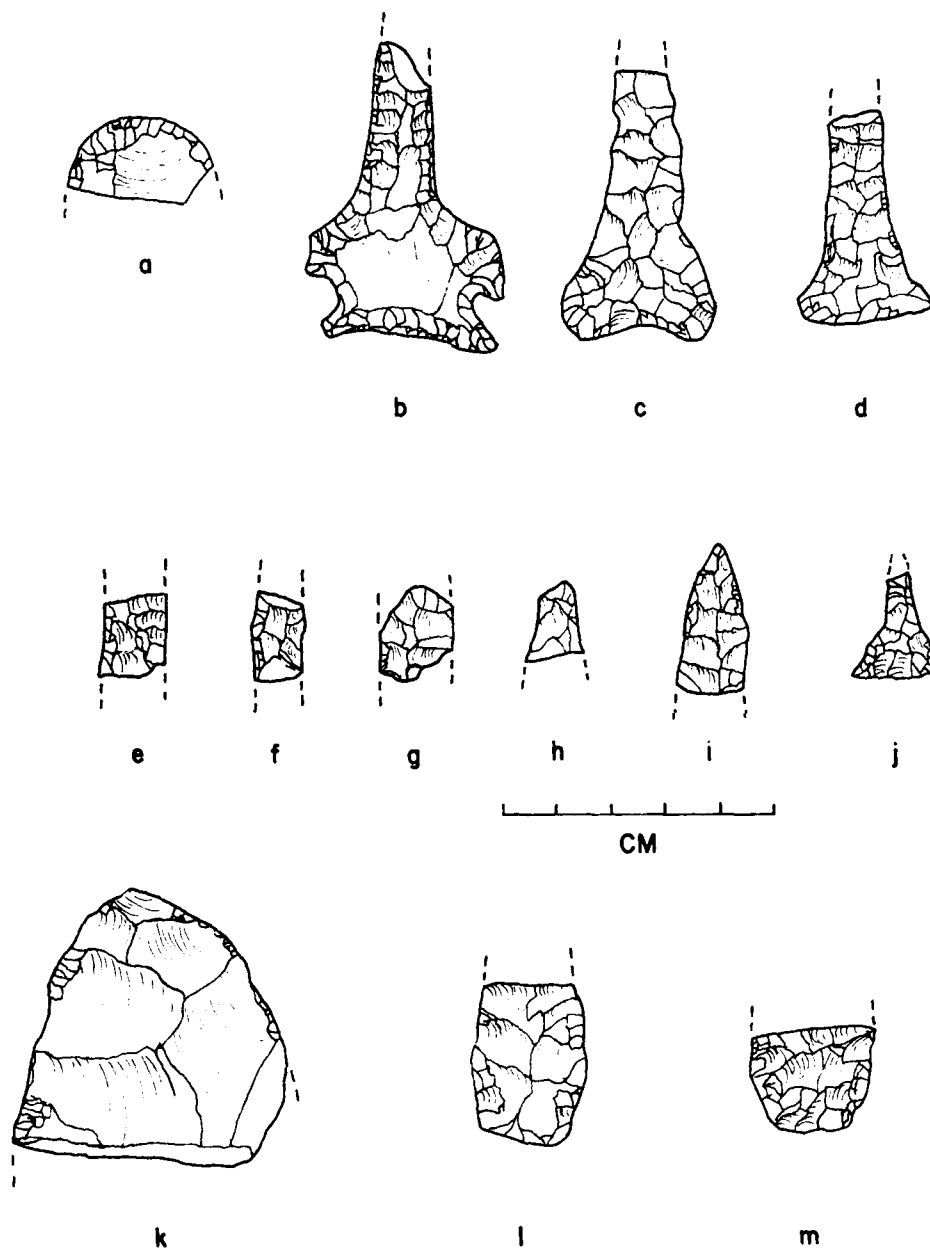


Figure 64. 23MC65. Artifacts. Scraper and Drills.
 (a) Group 51, (b-i) Group 54, (j) Group 55.

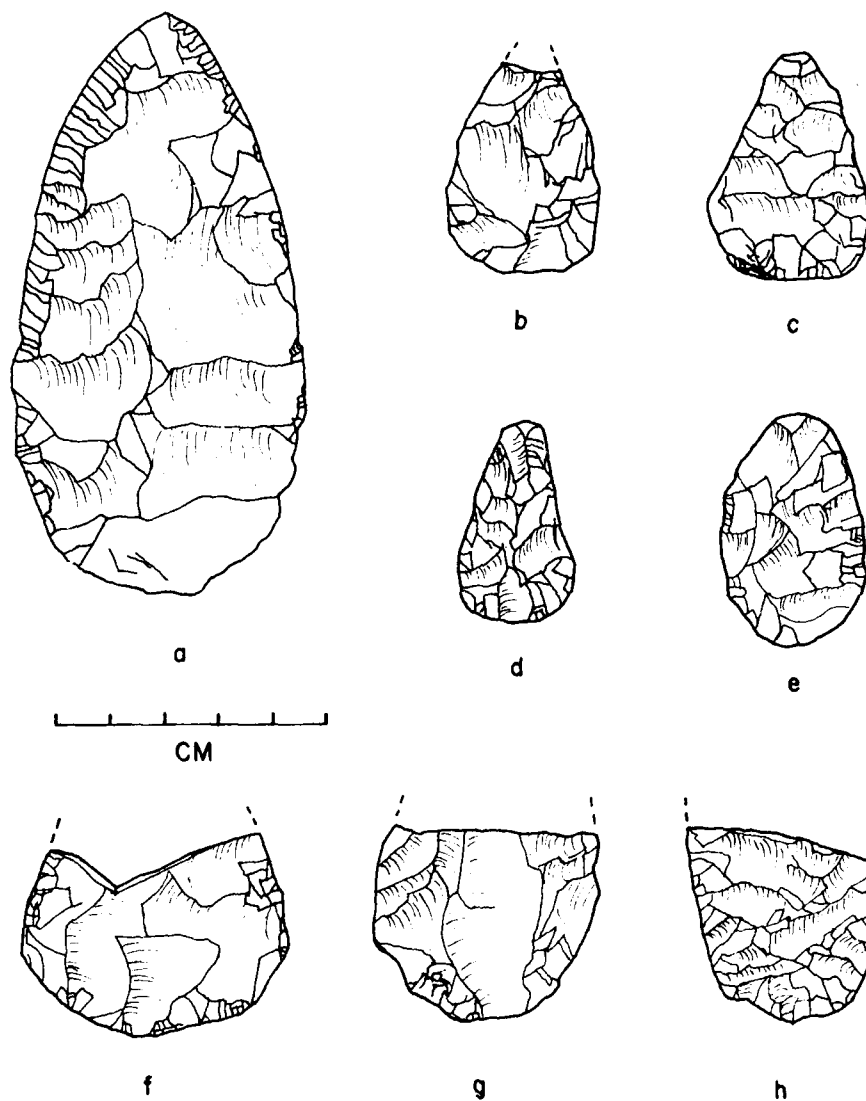


Figure 65. 23MC65. Artifacts. Bifaces. (a) Group 61, (b-d) Group 63, (e) Group 62, (f) Group 71, (g-h) Group 68, (i) Group 69, (j) Group 70.

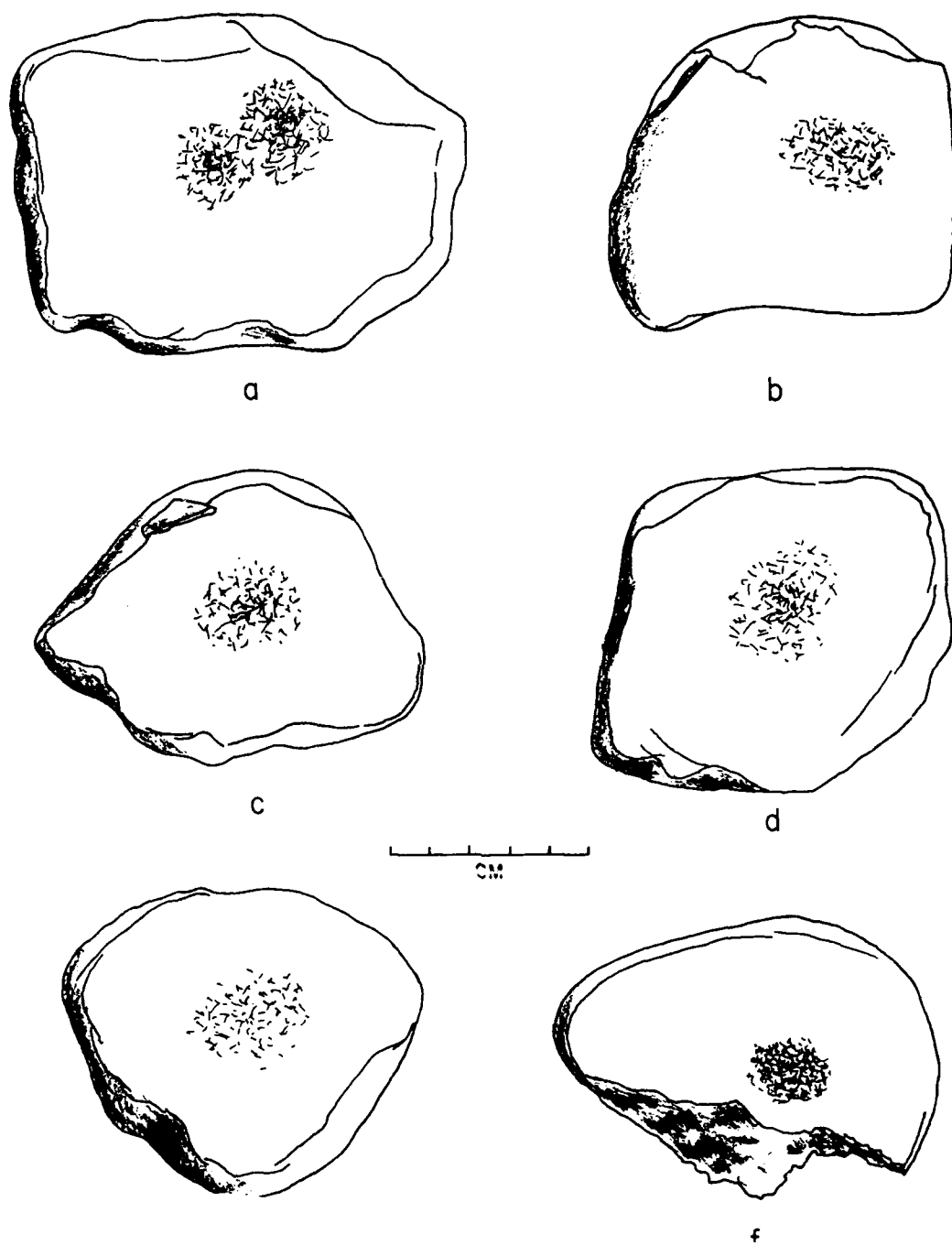


Figure 66. 23MC65. Artifacts. Pecked Stone.
(a-f) Group 90.

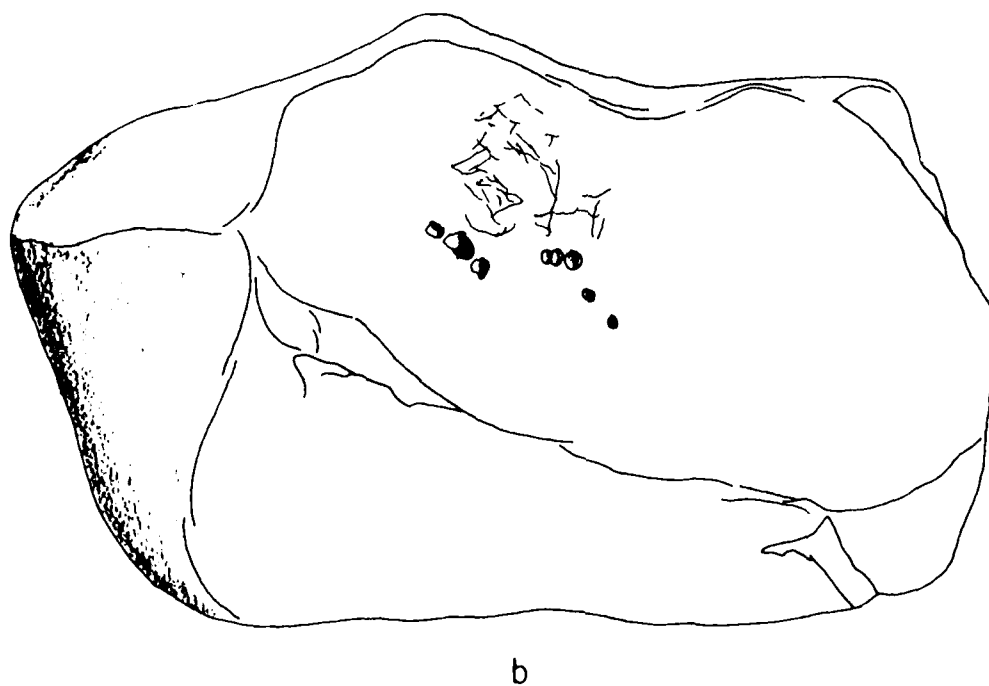
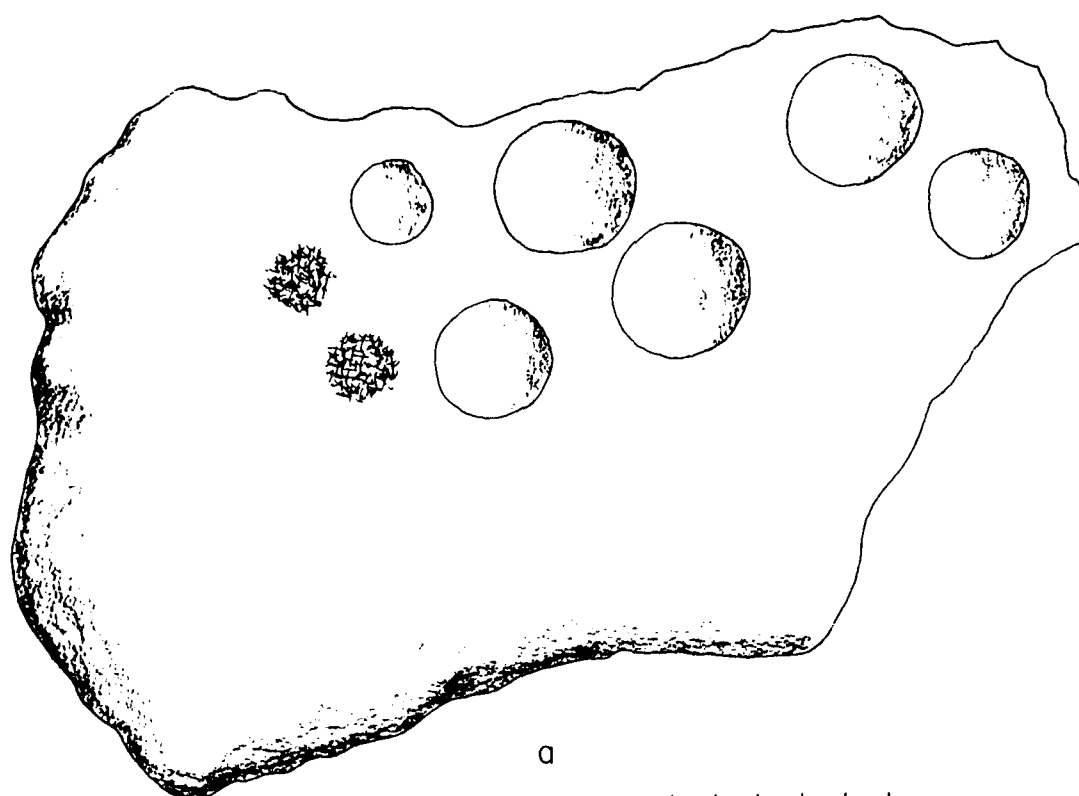


Figure 67. 23MC65. Artifacts. Pecked/Battered Stone.
 (a) Group 109, (b) Group 98.

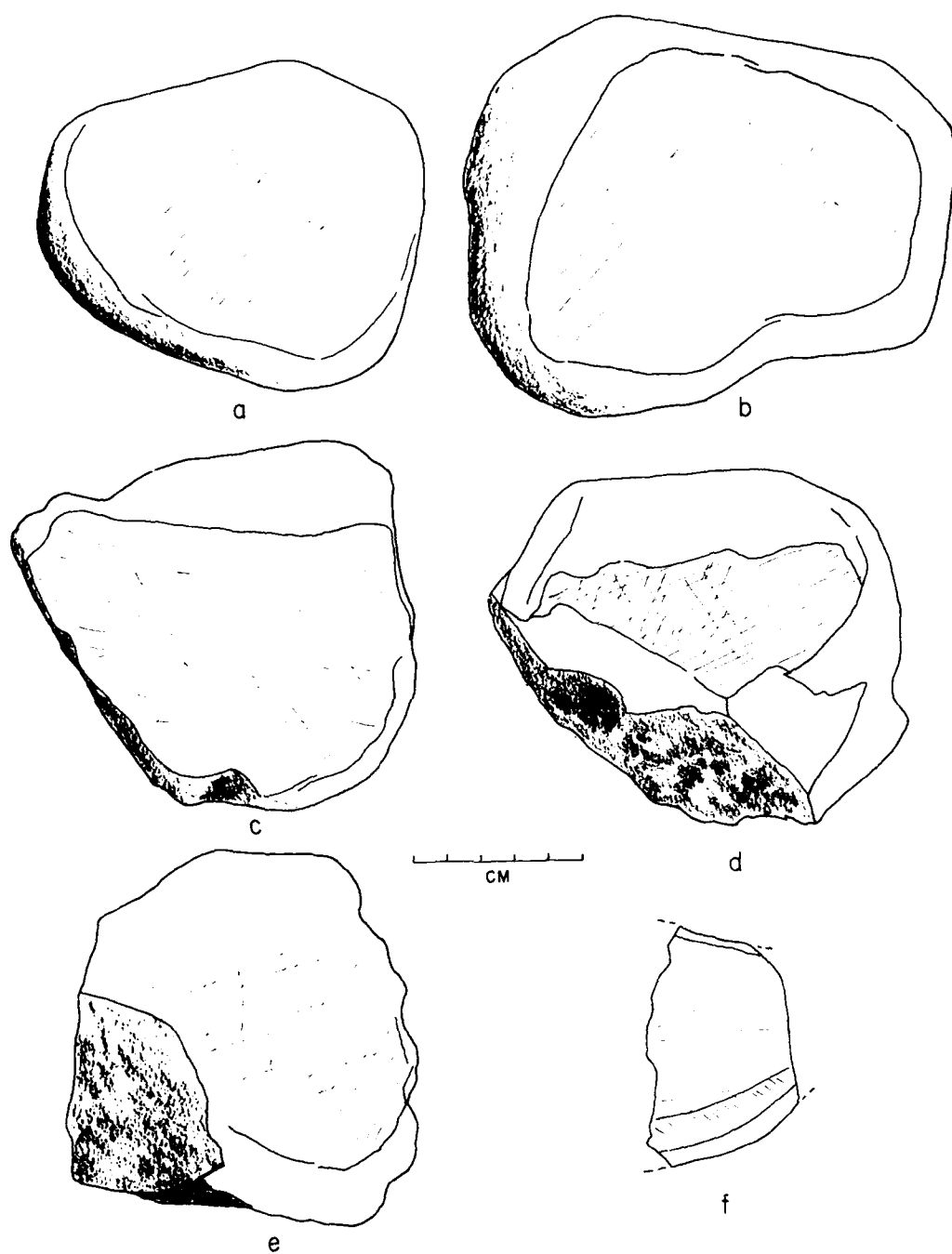


Figure 68. 23MC65. Artifacts. Ground Stone. (a-f)
Group 91.

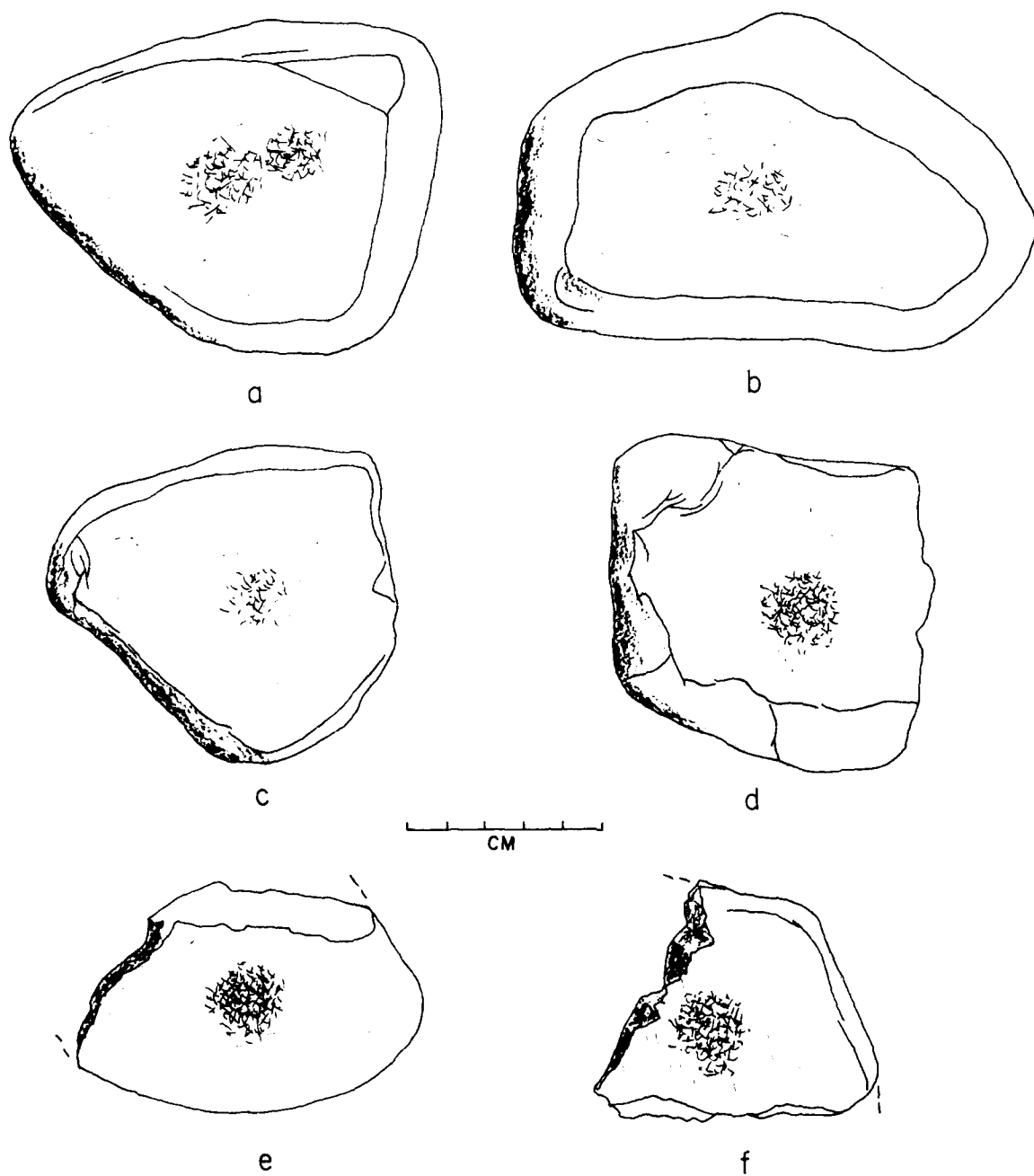


Figure 69. 23MC65. Artifacts. Ground and Pecked Stone.
(a-f) Group 93.

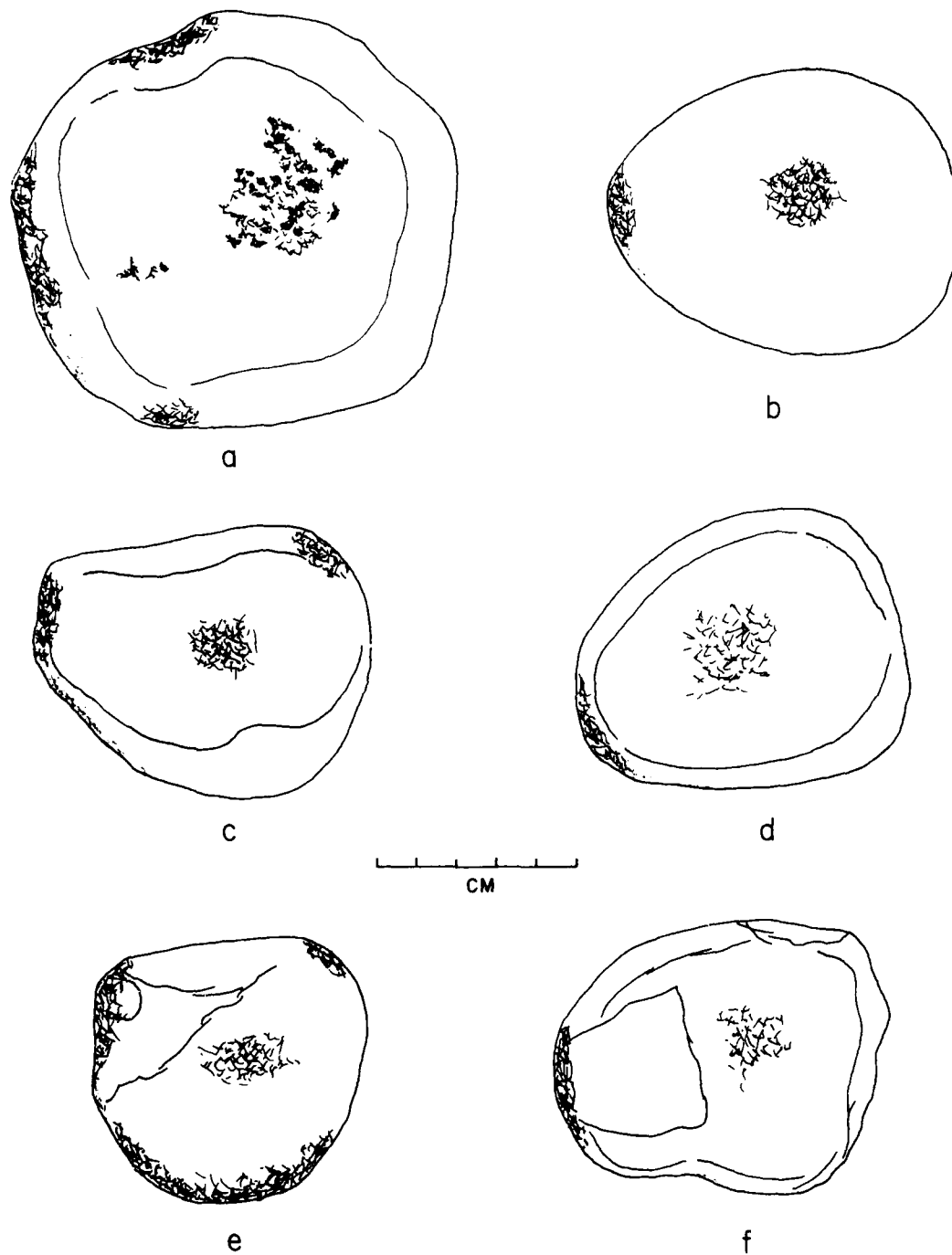


Figure 70. 23MC65. Artifacts. Pecked and Battered Stone.
(a-f) Group 94.

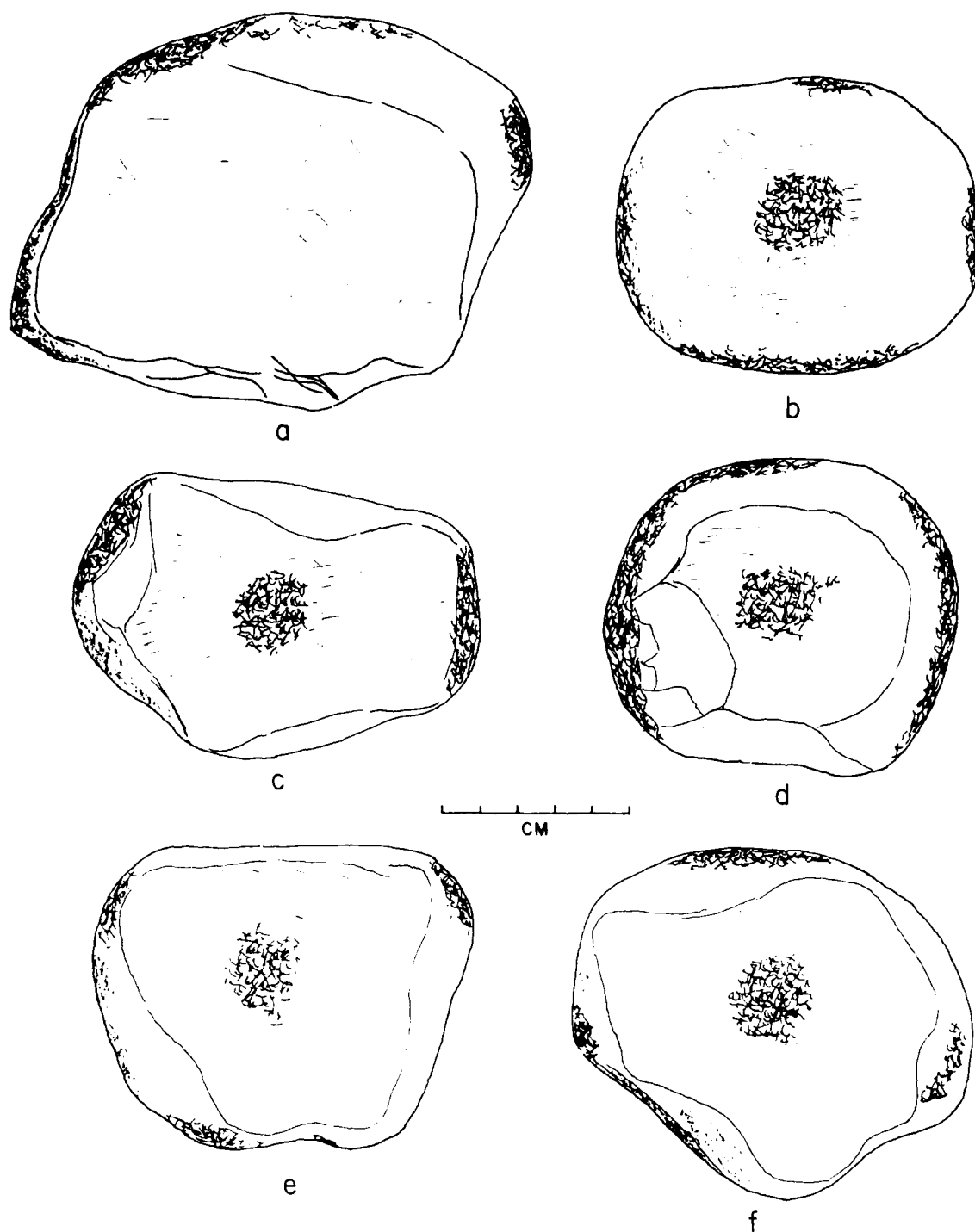


Figure 71. 23MC65. Artifacts. Ground, Pecked, and Battered Stone. (a) Group 95, (b-f) Group 96.

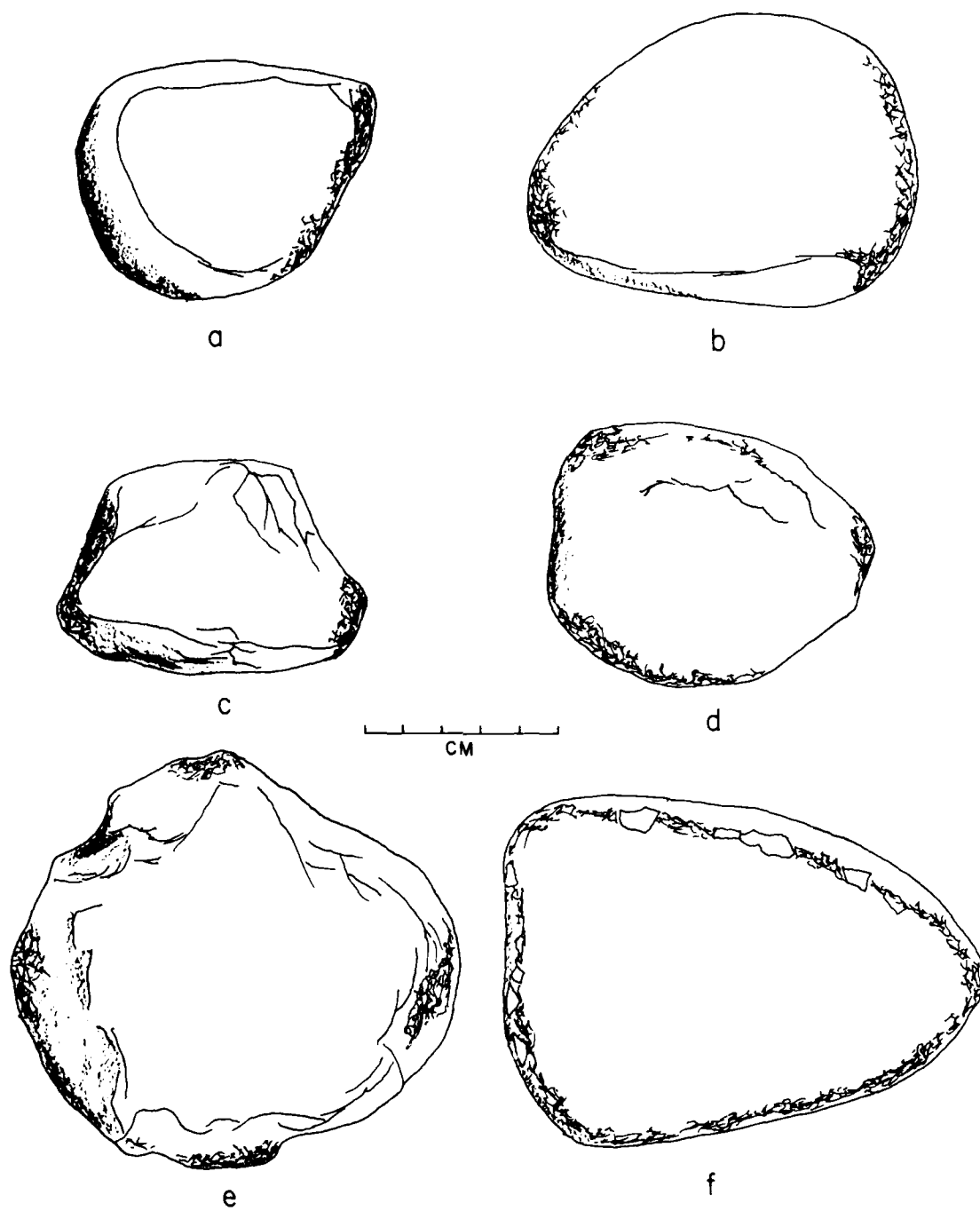


Figure 72. 23MC65. Artifacts. Battered Stone.
(a-f) Group 92

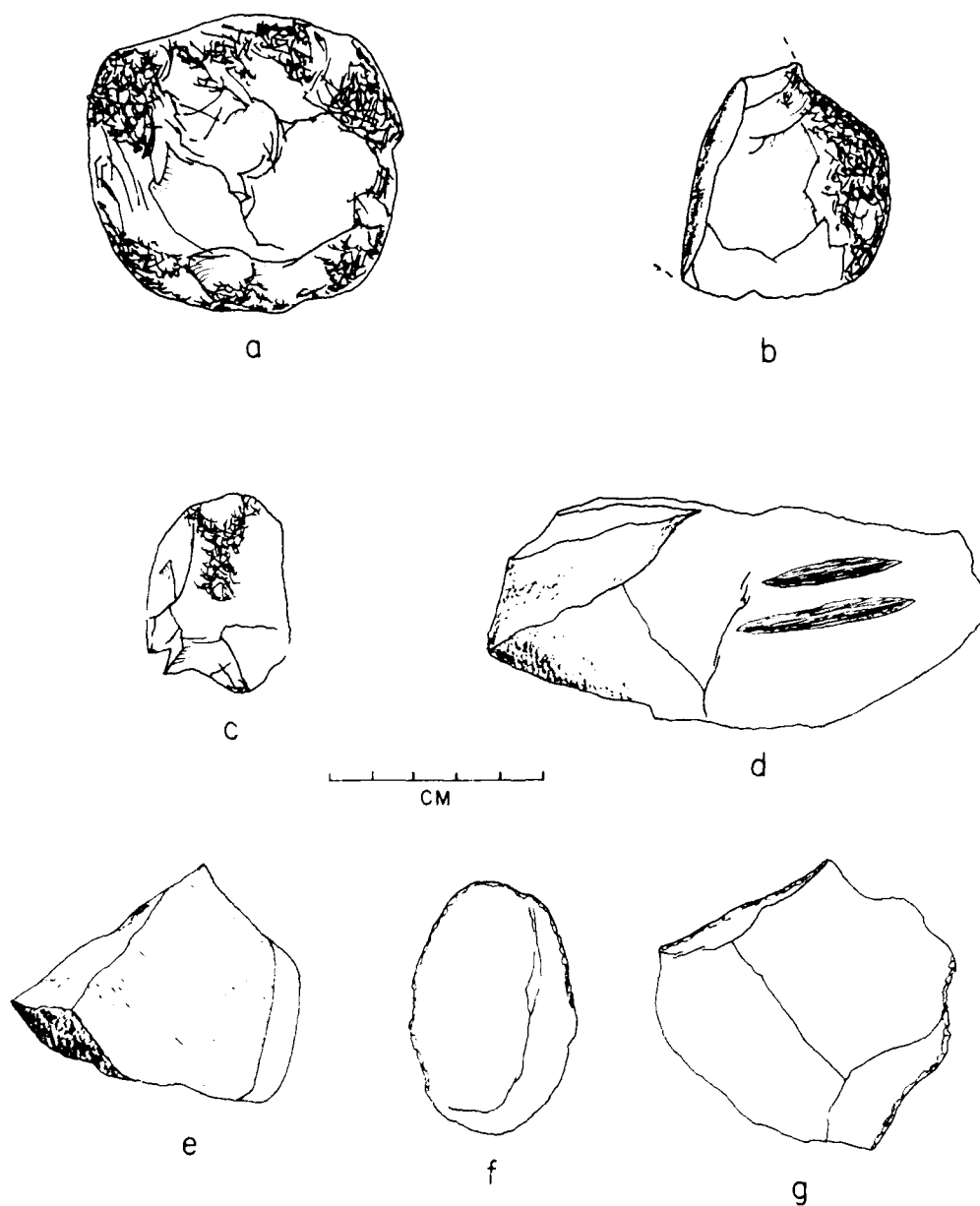


Figure 73. 23MC65. Artifacts. Modified Stone. (a-c) Group 97, (d) Group 102, (e) Group 101, (f-g) Group 110.

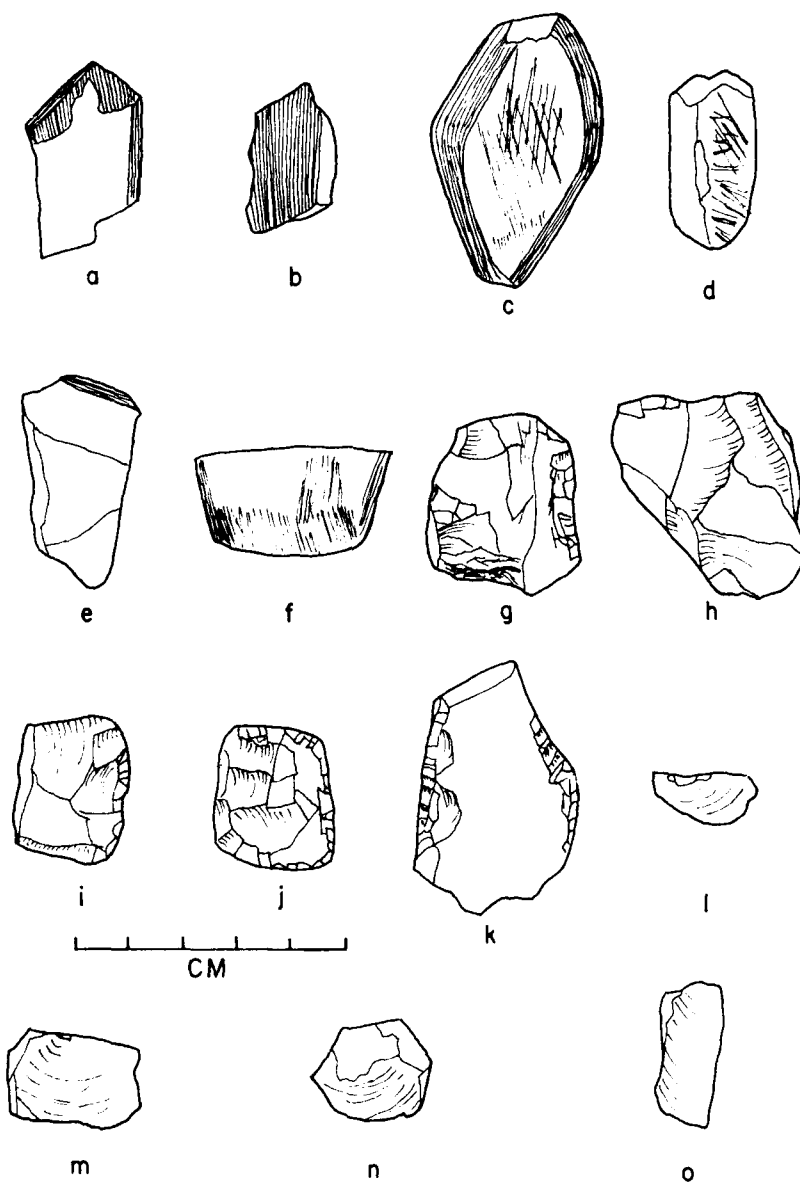


Figure 74. 23MC65. Artifacts. Hematite. (a-c) Group 118, (d-f) Group 123, (g-k) Group 117, (l-o) Group 119, (p-r) Group 126.

This site lies on the right (west) bank of the East Fork approximately three-quarters of a mile north of the dam axis. The hill on which the site lies appears to be an old remnant of Pleistocene valley fill. Although labeled as a terrace in the Design Memorandum, the surface configuration as well as the interior structure do not have the characteristics of a terrace. The hill was extremely long and isolated by an old meander loop of the river to the north and by a large intermittent stream to the south. Slopes are gentle except along the northern edge where they were steep, indicating that the river had flowed along that edge of the site. The meander loop north of the site was an area of Wabash clay indicating a large area of bottomland prairie. The river originally flowed some 600 feet east of the site. The size of the site is estimated to be approximately 1200 feet northwest-southeast by 300 feet north-south. The elevation of the site is approximately 778-790 feet m.s.l. Visibility was fair, but the majority of the site had already been destroyed. Most of the material recovered comes from a small area at the northwest edge of the site. Material density was not high.

MATERIAL COLLECTED

PREHISTORIC

CHIPPED LITHIC ARTIFACTS

Distal Projectile Point

Fragment	1
Thin Biface Fragments	3
Miscellaneous Worked Chert.	1

FLAKE TOOLS

Utilized Flakes	2
---------------------------	---

LITHIC WASTE

Chert Flakes	52
Chert Shatter	13
Quartzite Flake	1
Quartz Flake	1
Fire-cracked Rock	3

None of the material collected is diagnostic of any chronological period, site function, or of seasonality. The additional material does not add information beyond that already recovered.

Previous excavations on the site (Grantham 1979:282-302) yielded a sample of material to compare with other sites in the area. Much of the site had already been disturbed when the site was first tested. During this season's field collection, the site area had been almost completely destroyed. Only a very small area near the northwestern margin of the site had been disturbed but not destroyed. Material was, however, collected from the entire area of the original site designation.

Surface collections (Grantham 1977) and testing of the site (Grantham 1979) indicated that several components were present on the site. Side-notched forms similar to Big Sandy Notched (Grantham 1979:297) were recovered from the surface as well as a base of an Agate Basin Lanceolate (Grantham 1979:300). These forms were believed to indicate an Early/Middle Archaic component on the site. A Late Archaic occupation was indicated by a single large, stemmed point. The Late Archaic component was considered tentative since a single point is not a good basis for chronological assignment. A late Middle Woodland and/or a Late Woodland component was present on the site as indicated by two small, corner-notched points.

The presence of ground and pecked stone tools (Grantham 1977) indicates that activities associated with plant processing occurred on the site, but these tools represented less than thirty percent of the morphologically recognizable tools. This is radically different from other sites in the area. In addition, the small size and small quantities of fire-cracked rock differed significantly from other sites in the area. Flake tools were present in relatively high proportions both from the surface and from test excavations on the site.

The radically different assemblage from the site indicates that the types of activities which occurred on the site were different from the larger fall seasonal sites. The larger numbers of tools indicative of hunting would indicate a heavier reliance on hunting in the economy. In addition, the small amounts of fire-cracked rock would tend to indicate that activities involving heat retention (e.g. cooking) were not important. The heavy occurrence of incidental tools and a heavier indication of cutting activities would also tend to associate more with hunting activities. Thus, the site appears to have activities more heavily oriented toward hunting and associated activities. The site appears to represent a large bottomland hunting camp utilized repeatedly but with occupations of apparent short duration.

This site lies on the right (west) bank of the Long Branch, approximately one-half mile northeast of the confluence of the Long Branch with the East Fork. The site consists of four small earth and stone mounds. The mounds lie in an approximate northeast-southwest line, perpendicular to the long axis of the ridge. The mounds lie in the approximate center of the hill. The hill is isolated by meander loops of the river to the north and south of the hill. Slope edges are steep, and the river originally flowed near the southern edge of the site. The mounds lie at an average elevation of 805 feet a.m.s.l. Two of the mounds have been heavily damaged, one has been only slightly damaged, and the fourth does not appear to have been disturbed. The mounds were burial mounds.

This site was selected for excavation due to the difference in function (i.e. mortuary as opposed to habitation). Earlier excavations had revealed that these burial mounds contain Middle Woodland materials in the fill, but the fill appears to have come from the surrounding area. This area is a habitation site and predates the mound construction. The mounds themselves appear to have been constructed during the Late Woodland period based on ceramics near the base of the mound.

Originally only three burial mounds had been recorded. Two of these (23MC69-1 and 23MC69-2) had been heavily vandalized, and it did not appear that their excavation would be particularly informative. Almost all of the interior stone structure in these mounds had been removed. The third mound (23MC69-3) was partially excavated in 1975 (Grantham 1979). Although this mound had also been vandalized, the degree of disturbance was not great.

During the 1978 season, a reexamination of the site revealed a fourth mound just south and slightly west of mound three (Figure 75). This mound was designated mound four and given the number 23MC69-4. The mound was slightly lower than the other three mounds and was heavily overgrown. Its inconspicuousness had probably been its salvation from vandalism. Conversations with collectors in the area revealed that the other three mounds were well-known, but none knew of the fourth mound. The structure was intact and showed no signs of any vandalism. Due to its relative condition and the site's location in a high public use area, it was decided that excavation of the structure was necessary.

23MC69
1978 EXCAVATIONS
ONE FOOT CONTOUR INTERVAL

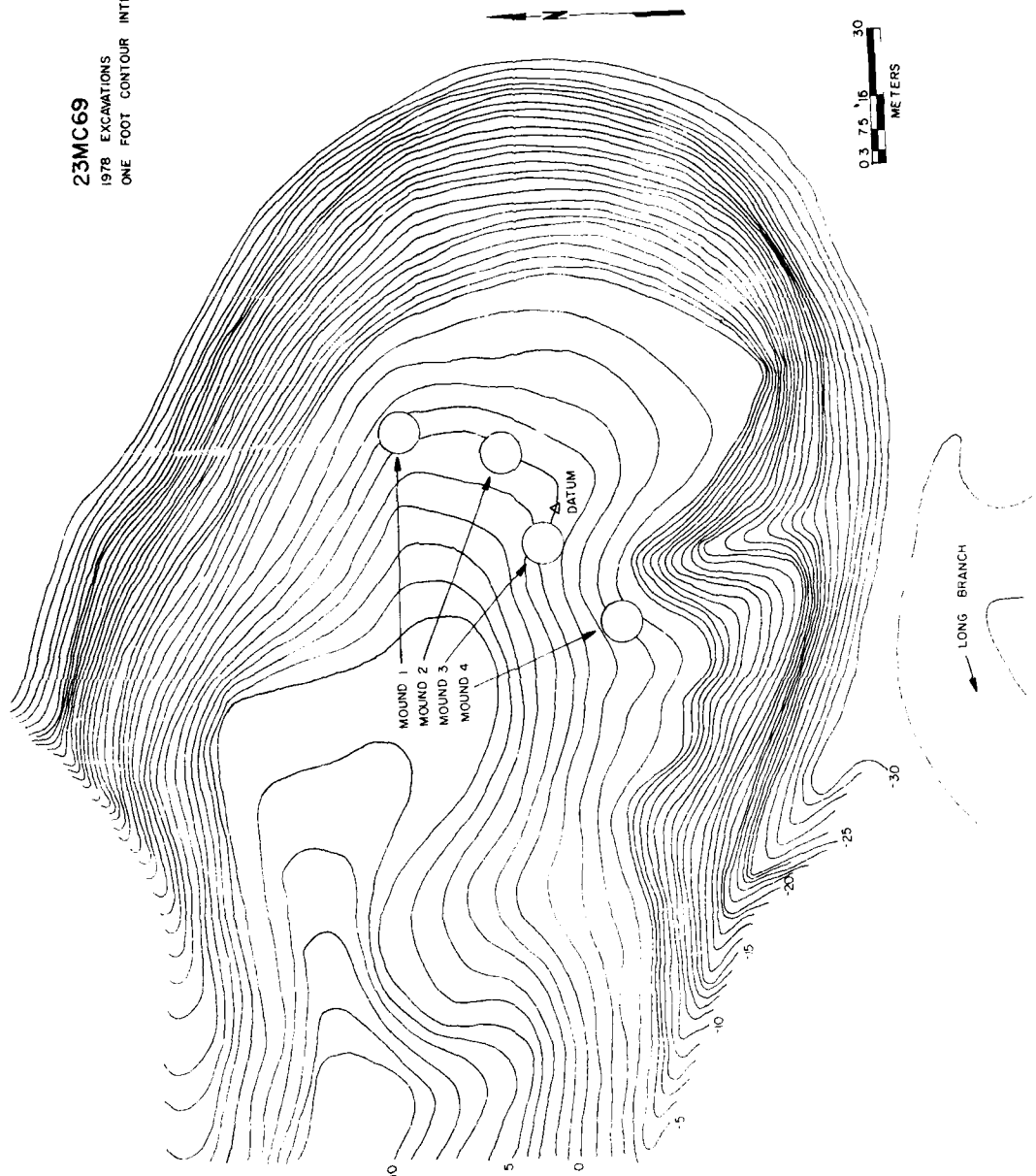


Figure 75. 23MC69. Site Map and Location of Excavations.

As it was decided that the structure represented a single construction phase (based on evidence from 23MC69-3), it was decided that a similar excavation strategy to that employed for 23MC69-3 would be used. A contour map of the mound was first generated (Figure 76). The mound was then gridded into four quadrants designed to bisect the structure following approximate cardinal directions. The entire quadrants were to be excavated as single units to the base of the mound. As it appeared that the structure would represent a single construction phase, arbitrary levels would be meaningless.

Horizontal control was maintained by recording distances from an arbitrary reference point near the highest point of the mound. Vertical depths were recorded as below datum depths. Vertical control was maintained using a line level from the arbitrary reference point near the highest point of the mound, this reference point was .20 meters above the highest point of the mound.

No buried soil horizon was detectable when the base of the mound was reached. The base of the original structure was therefore arbitrarily defined as the base of the stone structure in the center of the mound. Although we did not know that the mound was constructed by placing the stone on the original ground surface, it was the only clear assumption under which we could operate. When this level was reached, cultural material was still abundant. It was decided that if this was the original or approximately original ground surface, the material occurring below that level was part of the habitation site which preceded the mound construction. It was, therefore, decided that quadrant excavation would cease, a map of the surface was prepared, and excavations below that point would proceed as with any other habitation site.

A total of seven, one and one-half meter squares were excavated below the level arbitrarily designated as ground surface. The number of levels excavated below that point varied. One square had three, ten centimeter levels excavated. Three squares had two, ten centimeter levels excavated. Three squares had only a single ten centimeter level excavated. The initial test had three levels dug but the third level contained only one piece of fire-cracked rock near the upper boundary of the level. The remainder of the level was sterile. For that reason, only two, ten centimeter levels were dug in the other three squares at the corners of the other three quadrants. The remaining three squares dug in the southeast quadrant were dug as a test of the area of Feature 2 due to the large number of ceramics found in this area. They were not intended to be for depth.

23MC69
MOUND FOUR
SURFACE CONTOURS
.25 M. CONTOUR INTERVAL

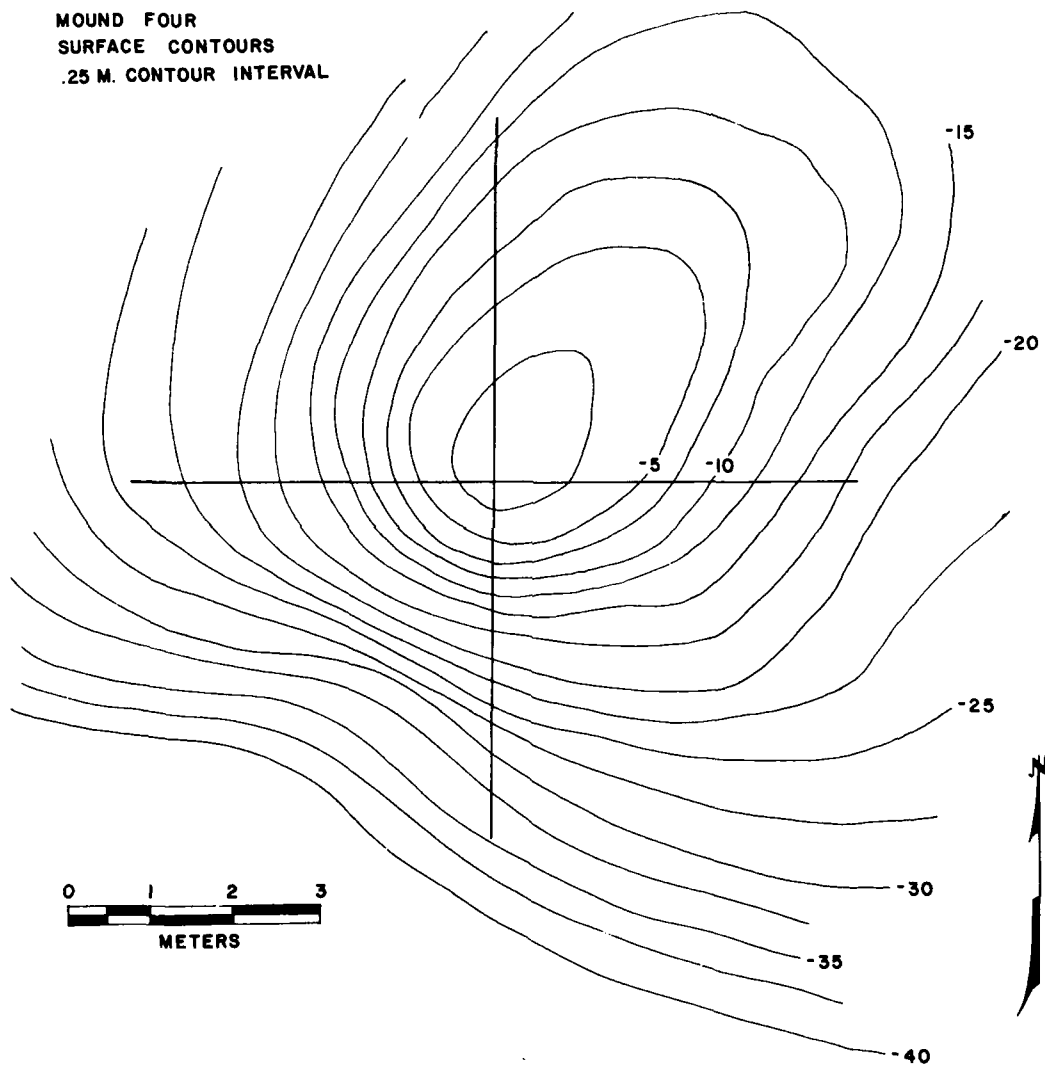


Figure 76. 23MC69-4. Contour Map of Surface Before Excavation.

Recovery techniques were the same as those used for the above mound structure. Horizontal and vertical control were maintained using the same system used for the mound.

No cultural stratigraphy was noted in the excavations. Deposits were fairly uniform throughout. The only physical stratigraphy noted was the result of soil horization. An A1-horizon extended from the surface to a depth of approximately eight centimeters below the surface. The mound fill and surrounding soil exhibited a B1-horizon throughout the fill, and a B2-horizon was not encountered until approximately twenty centimeters below the level designated as approximately original ground surface. A B2-horizon extended for an undetermined depth below that point.

Features

Feature 1

Feature one consisted of a large quantity of centrally-heaped sandstone blocks largely confined to the approximate center of the mound. A total of 126 sandstone blocks were placed irregularly to create a central structure. Specimens were not regularly placed in order to create a vault. There is an open area just east of the center of the mound which was devoid of sandstone blocks with the heaviest concentration east of the open area. Whether the open area or the main concentration to the east represents the main interment area cannot be determined. Bone preservation was nonexistent, and no bone was recovered. There were no soil discolorations or shadows to indicate where the body or bodies were originally located.

Feature 2

This feature was a small irregular feature located in the south central portion of the southeastern quadrant. The feature was roughly oval in cross-section and roughly conical in vertical cross-section. The longest axis was roughly north-south with the greatest length 14.0 centimeters. The greatest width was 7.8 centimeters, and the greatest depth was 11.5 centimeters near the center of the feature. The feature consisted of a large mass of wood charcoal. Wood charcoal has not yet been identified. The base of the feature would place the feature approximately on original ground surface. There was no other associated material.

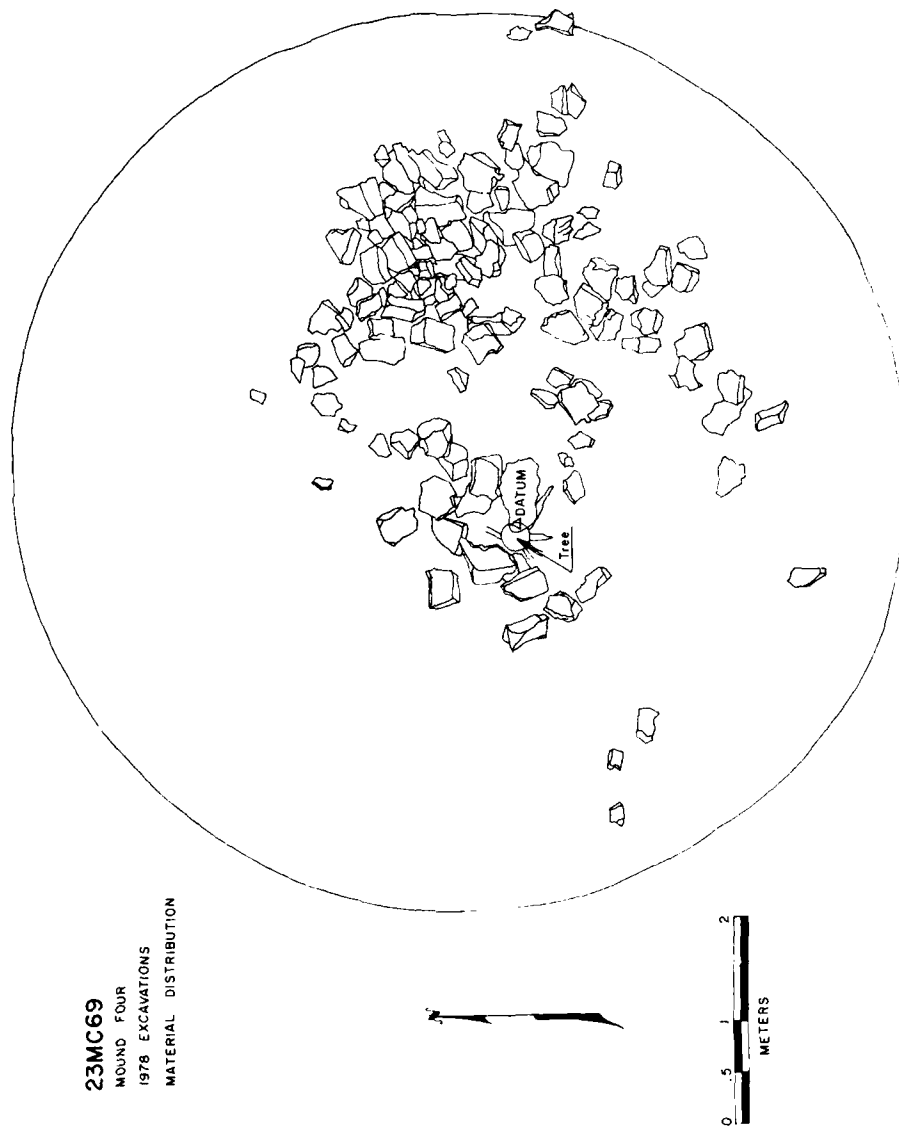


Figure 77. 23MC69-4. Distributional Map.

Feature 3

This feature was a small, circular, conical pit located in the first level of excavation unit 1170 and extended into the second level. The feature was located below the base of the mound and predates the mound construction. The longest axis was east-west, 18.3 centimeters across. The width was 17.5 centimeters, and the depth was 15.3 centimeters. The feature contained a small amount of decayed organics which contrasted with the surrounding soil. There was no associated material within the feature.

Description of Materials

Projectile Points

Group 8:a Small, Shallow Side-Notched Point - 1 proximal fragment (Figure 78, b)

The specimen in this category exhibits a straight base, rounded stem-base juncture, broad shallow side notches, weak shoulders, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary pressure flaking. Primary flake scars have largely been obscured by subsequent flaking. Only the central portion of one face retains primary flake scars. Secondary flake scars are medium in size, generally expanding, uneven in size, and inconsistent in distribution. An insufficient amount of the blade remains to tell if the specimen was ever resharpened. The specimen exhibits a transverse stress fracture, a small basal fracture, and a large percussion flake removed from one edge of the blade. Blank material is difficult to determine but appears to have passed through a preform stage.

Group 37:a Small, Corner-Notched Point - 1
(Figure 78, a)

The projectile point in this category has had the base fractured and then repaired. The point now exhibits a straight base, very short stem, broad corner notches, oblique shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists only of slight secondary pressure flaking. Flake scars are small, lamellar, fairly even in size, and inconsistent in size. Flaking covers only the edges of the blade and the base. The original dorsal and ventral flake surfaces are still readily apparent. Corner notches were created by the

removal of multiple pressure flakes, and final notch flakes were removed from the same face. The base was originally longer, was subsequently fractured, and then repaired. Flake scars from the notches appear to have originally extended further, and flakes along the base are thicker and expanding.

Group 44:a Large, Heavily Modified Point - 1
(Figure 78, c)

The specimen in this category is relatively large but has been so heavily modified that its original morphology can no longer be adequately determined. The specimen exhibits one straight lateral margin, one very slightly expanding stem, one weak shoulder, and a bi-convex cross-section. The specimen exhibits primary percussion and secondary pressure flaking. Primary flake scars are large, expanding, uneven in size, and inconsistent in distribution. Secondary flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. It appears that the specimen was resharpened at least once. Flake scars are small, lamellar to expanding, fairly even in size, and inconsistent in distribution. The specimen exhibits multiple fractures and modifications. It exhibits a distal transverse fracture which has subsequently been modified by the removal of multiple flakes down one face. One lateral margin has been completely removed by a burin-like blow from the distal fracture and another originating from the base. The latter fracture edge was subsequently heavily utilized along the face-fracture edge. Numerous minute flakes extend up onto one face. This utilization is unifacial-unilateral. The edge is acute and appears to have been utilized in a scraping motion. The base has also been heavily modified by the removal of multiple flakes from the base, and the base form is no longer distinguishable.

Bifaces and Biface Fragments

Group 72:a Distal Fragment - Thin, Broad, Pointed Biface - 1
(Figure 78, d)

The specimen in this category exhibits straight lateral margins, a roughly pointed distal end, and a bi-convex cross-section. The chipping pattern consists of primary percussion flaking only. The specimen exhibits little or no wear, and exhibits a transverse stress fracture.

Group 75:a-b Miscellaneous Thin Biface Fragments - 2

This category consists of miscellaneous thin biface fragments too small to be able to determine what kind of tool they originally represented. They exhibit no external attributes other than bifacial working which would allow their inclusion in any other category. Both specimens exhibit primary flaking only and lack careful edge trimming of the margins. Specimen 75:a exhibits a percussion fracture, and specimen 75:b exhibits a transverse stress fracture.

Cores

Group 78:a Core Fragment - 1

The specimen in this category exhibits flakes struck from two edges and a fracture plane which separated it from an originally larger core. The fracture plane is a stress fracture. It lacks cortical surfaces.

Flake Tools

Group 84:a Retouched Flake - 1 (Figure 78, e)

The specimen in this category exhibits intentional modification of the flake margins by additional flake removal. The specimen exhibits steep angled bifacial-bilateral retouch in order to create a narrow, drill-like working element. The specimen was subsequently fractured across the working element. The fracture is a transverse stress fracture.

Group 86:a-b Utilized Flakes - 2

The specimens in this category exhibit modification of the flake margins through utilization. Edge damage consists of the removal of additional small flakes from the flake margin. Both specimens are flake fragments. Both specimens exhibit acute working elements. Specimen 86:a exhibits bifacial-bilateral wear, and specimen 86:b exhibits unifacial-unilateral wear. Specimen 86:a appears to have been used in a cutting motion, while specimen 86:b appears to have been used in a scraping motion. Specimen 86:a has both lateral margins utilized, and the proximal end is missing. Specimen 86:b is a lateral fragment, and the number of utilized edges is impossible to determine.

Ground and Pecked Stone

Group 90:a-b Ground Stone - 2 fragments (Figure 78, f)

The specimens in this category exhibit at least one face which has been culturally ground. Specimen 90:a exhibits cortex removal, cultural striations, and polish along the high points. Specimen 90:a exhibits cortex removal only. Both specimens are too highly fragmentary to determine the number of ground faces or if grinding was the only cultural modification. Both specimens are fire-cracked.

Group 105:a Chipped and Ground Stone - 1 (Figure 78, g)

The specimen in this category exhibits a ground face and a number of flakes removed from the edges. The specimen exhibits one ground face. The specimen exhibits additional alteration around almost the entire circumference of the cobble. One edge was subsequently utilized. This edge exhibits edge heavy rounding, especially along the flake scar ridges. It would appear to have been utilized in a chopping motion. The specimen exhibits one fire-crack along one end.

Group 112:a Modified Stone - 1 (Figure 78, h)

The specimen in this category is somewhat enigmatic. The specimen is a small argillite pebble which exhibits a natural void in it. These voids are clay-filled and are relatively common in glacial argillite cobbles. This void has been culturally modified. The opening in the pebble has been intentionally expanded. The opening exhibits cortex removal and appears to have been expanded by using a tool in a scraping motion rather than a rotary motion. Cortex removal is relatively flat but highly irregular. The reason for the modification is unknown.

Group 113:a Incised Stone - 1 (Figure 78, i)

The specimen in this category is a piece of local nodular limestone. The specimen exhibits two shallow lines incised on one face, and three deep notches cut near one edge. Incisions are deep and narrow and have secondary cortex redeveloped in the incisions. The reason for the alteration is unknown.

Hematite

Group 118:a Ground Hematite - 5 (1 altered)

Only a single specimen has been culturally altered. The specimen exhibits heavy heat spalling on both faces, and the two edges have fine striations parallel to the longitudinal axis. Striations are fine and unidirectional. The specimen was ground on a fine-grained abrasive (e.g. sandstone).

Ceramics

Pottery - 700

Sample: 2 rim sherds, 133 body sherds,
and 565 eroded body sherds.

Group 126

Ceramics One: Sand-tempered, smooth body with
rim-lip notching and bosses.

Paste:

Temper: Highly rounded, sand-sized
particles, mainly quartz but with
some plagioclase. Particles are
generally small (.1 to 1 mm).
Some are very large (up to 9 mm).
Temper constitutes a very small
amount of the paste (only about
5-15% of the total volume).

Hardness: 3.5 to 4.7 (Mohs' scale)

Texture: Paste ranges from friable to
somewhat compact. In less com-
pacted sherds lamination tends
to occur roughly parallel to
the interior-exterior surfaces.
Temper is fairly evenly distri-
buted except at the surfaces.

Color: Colors range considerably on ex-
teriors from reddish yellow
(5YR7/8) through red (2.5YR5/8)
to reddish brown (2.5YR5/4).
Darker shades include light brown-
ish gray (10YR6/2) to dark red-
dish gray (10YR4/1) to black
(5YR2/1). Darker tones are more

common on sherd interiors. Colors from interior to core and core to exterior change abruptly. Color represents the most variable characteristic.

Method of Manufacture: The probability is high that the vessels were lump modeled, since there are no traces of coil fractures and sherds break irregularly. Finger impressions on interiors are also abundant. Contortion of the lamination in the core occurs around larger particles of sand. There is no evidence of the use of an anvil on interiors as finger marks are present, and there was no apparent attempt to remove them.

Surface Finish: 133 body sherds all have smoothed surfaces. Surfaces appear to have been paddled, as temper at the exterior surface is lower in volume than the core. This created a surface which exfoliates easily.

Form:

Lip: Flattened on the two rim sherds

Rim: Rim sherds are small but appear generally to be straight to slightly outsloping.

Body: Bodies appear to have been slightly S-shaped with both neck and shoulder sherds present. Bases appear to have been slightly pointed and nearer to spherical. A single basal sherd was present.

Decoration:

Lip: Rim-lip notching is present on two sherds. In one case, the rim-lip notching is a plain dowel impression. In the other case, it appears to have been a cord-wrapped dowel impression.

Rim: Rims exhibit punch and bossing,
but the distance from the lip
cannot adequately be determined.

Body: None. All body sherds are smooth.

Group 133:a - ae Burned Clay - 31

The specimens in this category are clay which had been fired intentionally or unintentionally. They differ from pottery only in that they lack temper. All specimens are eroded and highly irregular in shape.

Waste

Group 134: Chert Waste - 184

A total of 150 unmodified chert flakes and 34 pieces of unmodified chert shatter were recovered from the excavations.

Group 135: Quartzite Waste - 2

A total of two unmodified quartzite flakes were recovered from the excavations.

Group 141: Fire-Cracked Rock - 15,978

Fire-cracked rock is the term used for thermally altered stone. Some of the material included as fire-cracked may represent frost heave from the large centrally heaped sandstone blocks.

Group 142: Unmodified Stone - 2,866

The specimens in this category lack any intentional or unintentional cultural modification. These include largely glacial material. They appear to represent residual materials unintentionally transported to the site, as the crest of the hill is loess.

Group 143: Centrally Heaped Sandstone Blocks - 126

These blocks were part of the mound construction. They consist of centrally heaped blocks of Flint Hill sandstone. Observations were made on the amounts and presence/absence of cortex. They were not returned to the laboratory. Their distribution appears in Figure 77.

Historic Materials

Group 144: Historic Materials - 3

Historic materials include one cinder, and two recent mammal bone fragments.

TABLE 31
Artifact Measurements and Attributes - 24MC69-4

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<i>Projectile Points</i>					
Small, Shallow Side-notched Point					
8 a	1008	203	18	7g ²	proximal fragment
Small, Corner-notched Point					
37 a	1008	21	19	1g	
Large, Heavily Modified Point					
44 a	1146	452	252	9g ²	multiple fractures
<i>Bifaces</i>					
Distal Fragment - Thin, Broad, Pointed Biface					
72 a	1130	392	402	7g ²	distal fragment
<i>Cores</i>					
Core Fragment					
78 a	1136	59	62	29	33g
<i>Flake Tools</i>					
Retouched Flake					
84 a	1136	302	20	5	3g ² proximal fragment
<i>Utilized Flakes</i>					
86 a	1008	112	24	6	4g ² 2 edges
86 b	1136	212	192	32	1g ² 1 edge
<i>Ground and Pecked Stone</i>					
Ground Stone					
90 a	1161	74	54	46	218g Quartzite 1g?
90 b	1148	152	102	92	1g ² Argillite 1g?
Chipped and Ground Stone					
105	1136	91	74	39	352g Argillite 1g, ch
Modified Stone					
112 a	1005	45	38	21	44g Argillite
Incised Stone					
113 a	1168	57	32	10	10g Limestone
<i>Hematite</i>					
Ground Hematite					
118 a	1167	14	13	2	1g 2 Facets

TABLE 32
DISTRIBUTIONAL SUMMARY - 23MC69-4

	Xu1001	Xu1002	Xu1003	Xu1004	Xu1153			Xu1157		Xu1158		Xu1159		Xu1169	Xu1170	Xu1171
					L.1	L.2	L.3	L.1	L.2	L.1	L.2	L.1	L.2	L.1	L.1	L.1
37	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
72	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
78	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
118	-	-	1	1	-	-	-	-	-	1	-	-	-	-	2	-
126	72	140	120	300	9	-	-	-	-	19	10	14	-	1	1	-
133	1	22	4	3	-	-	-	-	-	-	-	-	-	-	-	-
134	13	36	24	68	4	2	-	-	-	11	4	8	6	1	3	-
135	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-
141	1856	4210	2808	6376	67	15	2	61	7	270	71	105	43	20	22	10
142	295	554	505	883	33	47	11	79	63	66	56	54	62	52	33	73
143	4	54	15	53	-	-	-	-	-	-	-	-	-	-	-	-
144	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-

The Site Assemblage: 23MC69-4

The specimen in Group 37 belongs to the type Koster Corner-notched (Perino 1971a :100). The form is common in Illinois (Perino 1973:166) and northeastern Missouri (Eichenberger 1939; Eichenberger 1944:Pl. II; Eichenberger 1956:Fig. 4; Henning 1961:139, 175; and Hunt 1976). Some related material may occur further west (Weichman 1976a:Pl. 3, a; Vehik 1971:Fig. 2, a; and Shippee 1967:Fig. 35, a; Fig. 40, k, l; and Fig. 45, f). Perino (1971a) estimated that a rough ordering of micro-points in western Illinois should be Klunk, Koster, and Schild. In seriating the ceramics from Cannon reservoir (Hunt 1976) observed exactly the opposite order. The type almost certainly post-dates Middle Woodland and probably early Late Woodland as well. Perino's (1971) estimate of A.D. 600 or 650 to 900 is believed to be essentially correct.

The specimen in Group 8 is difficult to compare with other materials as little comparable material was found. The specimen exhibits both primary and secondary flaking. A similar point was recovered during the survey (Grantham 1977:105-106). The specimen appears to fit well within White's (1968:17a) late sub-triangular varieties. Similar material occurs in late Middle Woodland contexts at the Trowbridge site in Kansas (Bell 1976:34). Possibly related materials also occur in later Middle Woodland contexts in the Kansas City area (Shippee 1967). The specimen appears, based on morphology and size, to belong to the late Middle Woodland or Late Woodland period.

The specimen in Group 44 has been so heavily modified that no indication of the original morphology remains and no comparisons can adequately be made. Bifaces are not particularly informative. The specimen in Group 72 is a distal fragment of a blank or preform due to the apparent lack of wear. The biface fragments in Group 75 tends, like most of the sites in the area, to indicate the long use life of tools and heavy reuse of tools until too fragmentary to be useable.

Flake tools are not particularly informative. The retouched flake in Group 84 was retouched in order to make a perforator-like tool. The utilized flakes in Group 86 have been utilized in cutting activities. The core fragment in Group 73 indicates the use of local materials. The chert waste in Group 134, however, indicates that little reliance was placed on local materials. Some 67-70 percent of the total chert waste has a non-local origin. The presence of quartzite waste (Group 135) also indicates the use of locally-available materials.

The ground stone in Groups 90 and 105 are connected with plant processing. Their relatively low number would indicate that plant processing was not that important in the subsistence economy. The reason for the modification of the specimens in Groups 112 and 113 is unknown. The only piece of altered hematite is ground. Grinding is present along two edges. Grinding was performed for pigment.

Ceramics (Group 126) is the only numerous artifact category in the entire assemblage. Ceramics are extremely similar to Weaver wares. Ceramics exhibit smoothed exterior surface finish. The decorated rim sherds exhibit plain and cordwrapped dowel impressions which are characteristic traits of Weaver ware ceramics (Fowler 1955; Hunt 1976:4). Hunt (1976:11) indicates that much of the pottery in the Cannon reservoir area shows close affinities for Weaver wares in Illinois, and that late Middle Woodland ceramics were characterized by a somewhat even representation of plain and cordmarked rimmed vessels. Prominent motifs include punch and bossing and rim-lip impressions. Undecorated rims occur in large frequencies. The ceramics in this collection have Weaver ware decorative motifs, but the extremely high percentages of plain bodies would appear to place the ceramic assemblage early in the Weaver ware sequence. It would thus appear to fall in the late Middle Woodland to early Late Woodland.

Fire-cracked rock (Group 141) dominates the cultural material, and it illustrates a heavy use of stone for heat-retention in fire-related materials. Both this material as well as most of the rest of the recovered material comes from the mound fill and from the site below the mound structure. Most of the recovered materials were not intimately associated with the mound's ground surface or with the actual construction phase of the mound. To determine if the sandstone blocks were originally surface material or if the stone was quarried, the amount and kind of cortex present on the blocks was tabulated. Only twelve percent of the specimens exhibit primary cortex over the entire surface, indicating that they were originally obtained from the surface. Twenty-two percent of the specimens have some primary cortex but exhibit secondary cortex or lack cortex on the remainder of the surface. These specimens had at least one surface exposed to weathering but originally required some excavation to remove them. Thirty-six percent have some traces of secondary cortex but lack any traces of primary cortex. Secondary cortex developed along fracture planes in the formations, and these specimens were completely buried. Thirty percent of the specimens lack any observable cortex and were also buried. Thus, sixty-six percent of the sandstone blocks

were once completely buried; twenty-two percent were partially buried; and only twelve percent appear to have originally been surface material.

The construction of the mound was thus a considerable undertaking. Most of the centrally heaped sandstone was quarried from the Flint Hill formation. The location of the quarry for the stone and the location of the borrow for the mound fill could not be determined. The Flint Hill formation lies immediately below the loess and glacial till cap on the hill, and the source of the material was probably no great distance from the mound itself.

The date of the construction of the mound is uncertain. The ceramics would tend to indicate late Middle Woodland construction date, but the points from the fill tend to indicate a possibly later date. Most of the specimens come from the mound fill and appear to be part of the site on which the mound was constructed. Ceramics below and in the mound fill are identical. Based on the points recovered from the fill, it would appear that the mound construction probably dates from mid-Late Woodland or later.

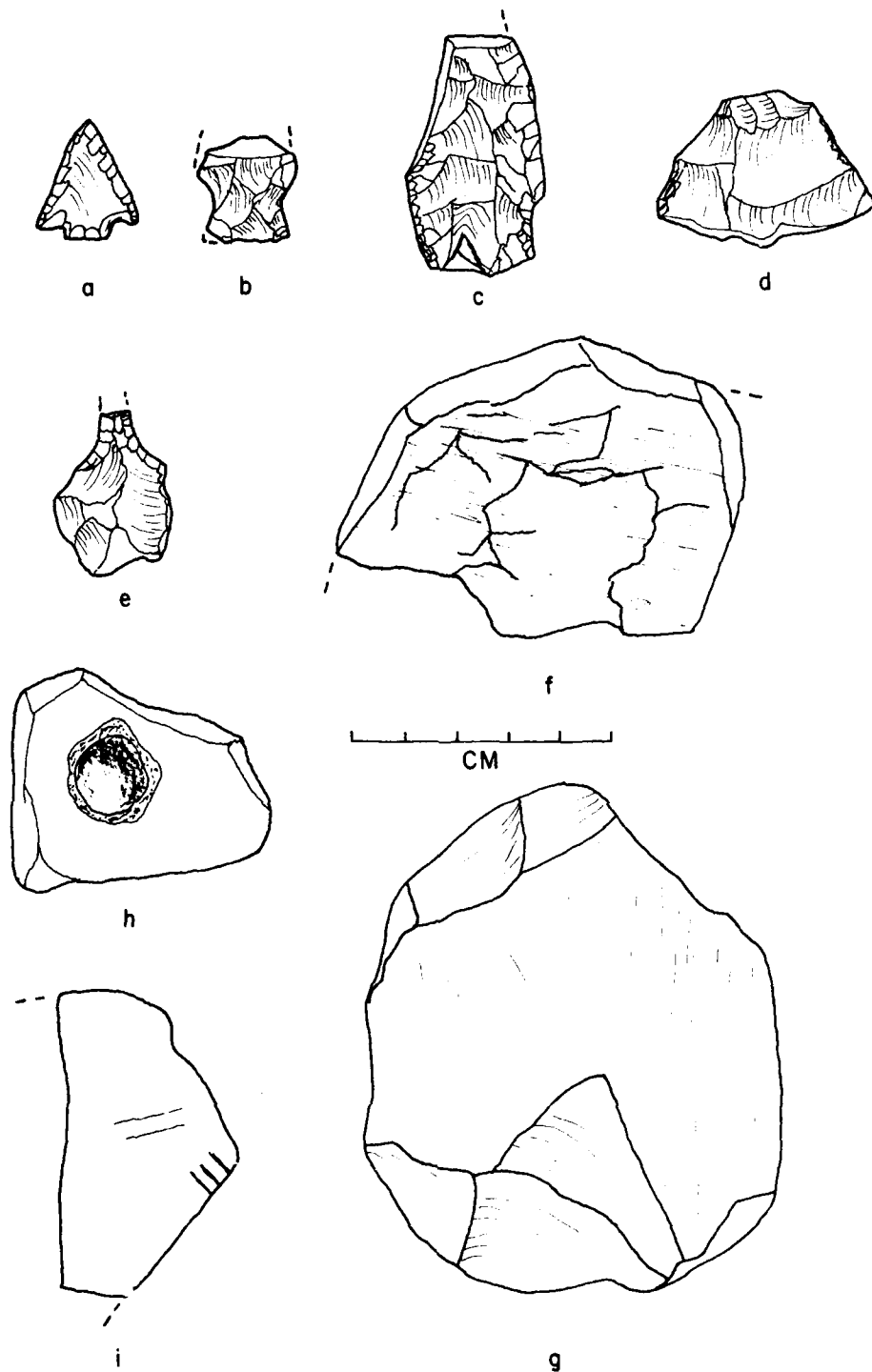


Figure 78. 23MC69-4. Artifacts. (a) Group 37, (b) Group 8, (c) Group 44, (d) Group 72, (e) Group 84, (f) Group 90, (g) Group 105, (h) Group 112, (i) Group 113.

This site lies at the extreme southern end of the ridge separating the two arms of the reservoir. The site lies about 800 feet north of the confluence of the Long Branch with the East Fork. The hill on which the site lies is a low, elongate ridge extending from the end of the main ridge. There was an old slough of the East Fork along the western edge of the site and a meander loop of the Long Branch along the eastern edge. The site size could not be determined as the area was in dense primary forest. As visibility was very poor, a shovel test was excavated during the survey. The only material recovered at that time came from the shovel test. Material density could not be determined. The site area is still in primary forest. The elevation of the site is approximately 775 to 795 m.s.l.

We did not intend to conduct extensive excavations on this site. We did not have any indication of the relative age of the site and we wished to obtain that information. This site with 23MC72 and 23MC225 form a complex series of sites near the juncture of the East Fork and the Long Branch. With an assessment of the temporal span, we believed that it might be possible to better understand the nature of this series of sites. In addition, the site would be partially inundated and would be on an island. It was therefore believed that if excavations would be required at a later date, severe logistical problems could result. It was, therefore, decided to test the site prior to inundation.

As the area has apparently always been forested, it was decided that excavations would proceed in arbitrary ten centimeter levels from the surface. A single one and one-half meter square was excavated (Figure 70). A total of three ten centimeter levels were excavated to a total depth of thirty centimeters below the surface.

No cultural stratigraphy with clear horizons was noted in the excavations, although deposits do appear to exhibit relative cultural stratigraphy. Deposits were fairly uniform throughout. The only physical stratigraphy noted was the result of soil horizonation. An A1-horizon extended from the surface to a depth of approximately eight centimeters below the surface. A B1-horizon extended from that point to a depth of approximately twenty-five centimeters below the surface. A B2-horizon extended for an undetermined depth below that point.

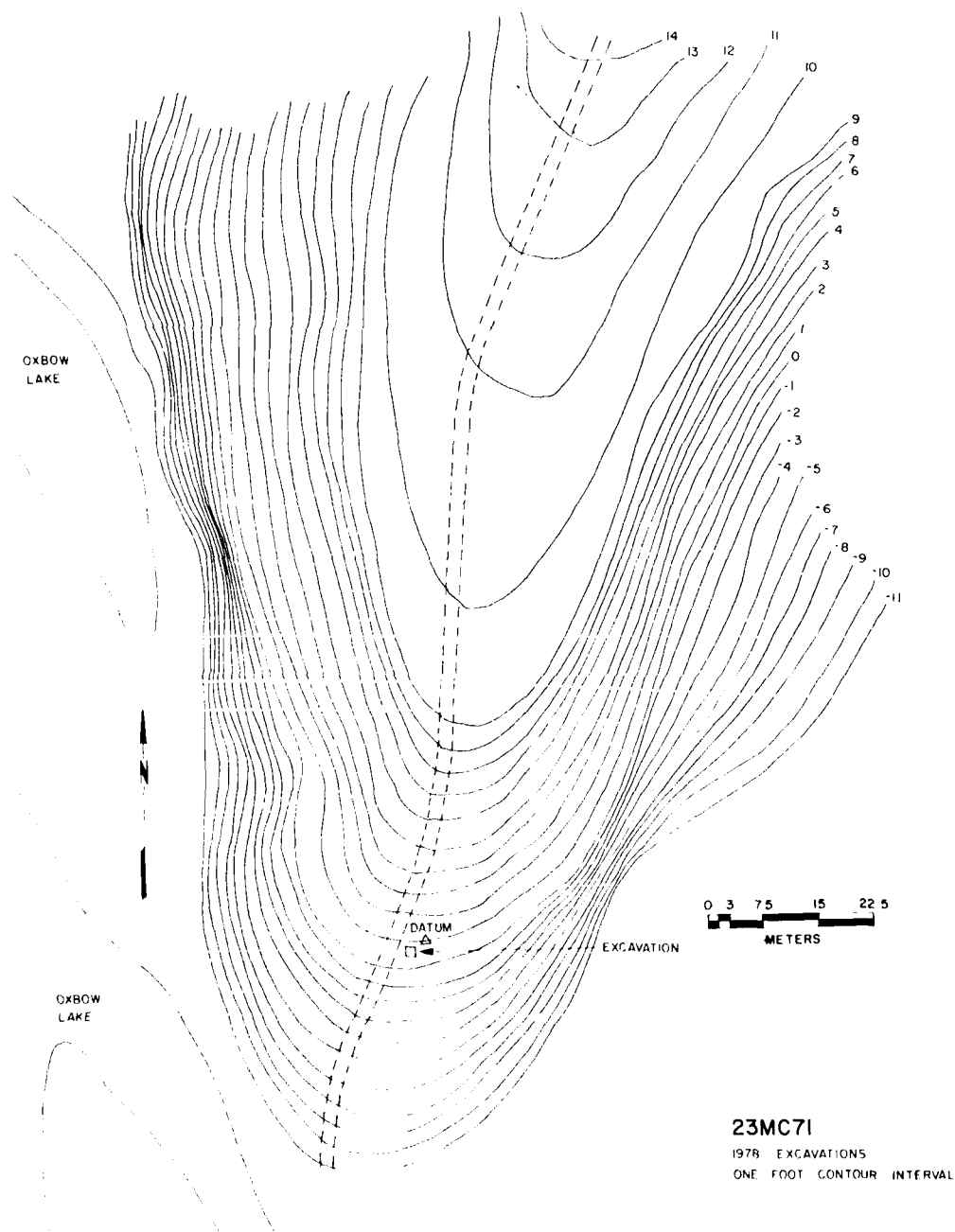


Figure 79. 23MC71. Site map and location of excavations.

Description of Materials

Points

Group 9:a Large, Square-stemmed Point - 1 promixal fragment (Figure 80, c)

The specimen in this group exhibits a straight base, straight lateral margins, abrupt shoulder, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary pressure flaking. Primary flake scars are relatively large but have been obscured or fractured such that little remains. Secondary flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. Very little of the blade section remains. Blank material is difficult to determine but appears to have passed through a preform stage based on the relative thickness and the presence of primary flake scars. The specimen exhibits a transverse stress fracture and a longitudinal stress fracture.

Group 10:a Small, Square-stemmed Point - 1 (Figure 80, a)

The specimen in this category exhibits a slightly convex base, relatively long, parallel stem margins, abrupt shoulders, convex lateral blade margins, and bi-convex cross-section. The chipping pattern consists of secondary pressure flaking only. Flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. The specimen exhibits little or no resharpening. Blank material is difficult to determine but appears to have been a chert flake based on the thinness of the specimen and the chipping pattern.

Group 44:a Heavily Modified, Reworked, Corner-notched Point -1 (Figure 80, b)

The specimen in this category originally appears to have been a corner-notched point. The base has been heavily reworked, however, leaving the original morphology questionable. The chipping pattern consists of secondary pressure flaking only. Flake scars are small, generally lamellar, uneven in size, and inconsistent in distribution. There appears to have been a fracture across the notches. This fracture was subsequently reworked, and no trace of the fracture remains. This reworking is fairly steep-angled and apparently was produced by percussion. Only small traces of the original notches remain.

Group 47:a Distal Projectile Point Fragment - 1
(Figure 80, d)

The specimen in this category consists of the entire blade segment of a medium-sized point. The chipping pattern consists of secondary pressure flaking only. Flake scars are small, lamellar, uneven in size, and inconsistent in distribution. The specimen exhibits a transverse stress fracture across the notches.

Flake Tools

Group 86:a Utilized Flake - 1

The specimen in this category is a chert flake which has been modified by the removal of minute flakes through utilization. The specimen is a small expanding flake with utilization along the two lateral margins. Utilization is light and extends along the entire length of the margins. Flake scars are bifacial-bilateral and appears to have been used in a cutting motion.

Ground/Pecked Stone

Group 90:d Pecked Stone - 1 (Figure 80, f)

The specimen in this category exhibits pecking on both faces. Pecking is centered on the faces. The degree of force was not heavy, as individual peck marks are not readily distinguishable. Utilization has resulted in concave areas on the faces. On both faces, the cortex has been pecked away, and the interior color contrasts sharply with the surrounding cortex.

Hematite

Group 121:a Ground Hematite Flake - 1 (Figure 80, e)

The specimen in this category is a hematite flake with a ground dorsal face. The ventral face exhibits criteria of percussion flakes. The dorsal face exhibits fine, multidirectional striations. The ground face was ground on a fine-grained abrasive. It appears to be a flake from a completed hematite tool.

Lithic Waste

Group 134: Chert Waste - 57

A total of thirty-six unmodified chert flakes and eight unmodified pieces of chert shatter were recovered from the excavations. Surface material included eleven unmodified chert flakes and two pieces of unmodified chert shatter.

Group 141: Fire-cracked Rock - 982

The specimens included in this category exhibit thermal alterations including burned and heat-discolored stone as well as obvious fire-cracked material. A total of 982 pieces of material were recovered from the excavation unit.

Group 142: Unmodified Stone - 141

The specimens in this category lack any intentional or unintentional modifications. They appear largely to be residual materials which were unintentionally transported to the site.

TABLE 33
Artifact Measurements and Attributes - 23MC71

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Points</u>					
<u>Large, Square-stemmed Point</u>					
9:a Sur.	25*	22*	8*	7g*	proximal fragment
<u>Small, Square-stemmed Point</u>					
10:a Sur.	36	20	6	9g	
<u>Heavily Modified Point</u>					
44:a Sur.	43	26	6	8g	reworked
<u>Flake Tools</u>					
<u>Utilized Flake</u>					
86:a Sur.	17	13	4	2g	2 edges
<u>Ground/Pecked Stone</u>					
<u>Pecked Stone</u>					
90:a Sur.	87	76	36	362g	Argillite 2p
<u>Hematite</u>					
<u>Ground Hematite Flake</u>					
121:a Sur.	36	23	5	8g	

TABLE 34
DISTRIBUTIONAL SUMMARY - 23MC71

	9	10	44	47	86	90	121	134	141	142
Xu102, L.1	-	-	-	-	-	-	-	14	362	49
L.2	-	-	-	-	-	-	-	22	470	57
L.3	-	-	-	-	-	-	-	8	150	35
Surface	1	1	1	1	1	1	1	13	-	-

The Site Assemblage: 23MC71

None of the material recovered is particularly diagnostic. The square stemmed point in group 9 is more common on Archaic sites in the area (cf. 23MC56, this volume), but the fragmentary nature of the point does not readily lend itself to temporal diagnosis.

The small square-stemmed point in Group 10 likewise is not particularly diagnostic. These small square-stemmed points seldom appear in assemblages. Somewhat similar material was recovered from the Shields site (Shippee 1967:Figure 21, a) where they appear to be Middle Woodland to Late Woodland. They also occur as a minor components on a number of sites in the Kansas City area (Bell 1976) where they appear to be late Middle Woodland to Late Woodland. They are noticeably absent in similar contexts in the Cannon reservoir area (cf. Hunt, 1977; Eichenberger, 1944). It is doubtful, however, that the specimen can be considered diagnostic.

The heavily reworked projectile point in Group 44 is also not diagnostic. Although similar materials occur in late Middle Woodland contexts in the area (cf. 23MC149, this volume), the heavily reworked base makes any temporal assignment questionable. Likewise, the chipping pattern on this specimen and the distal projectile point fragment tend to indicate a late Middle Woodland to Late Woodland component. All of these specimens do, however, indicate the relative importance of hunting in the subsistence base.

The utilized flake in Group 86 was used in a cutting motion and is indicative of another activity. The pecked stone in Group 90 indicate some plant processing occurred on the site, but the numbers of such tools in all the sites in this group (23MC72 and 23MC225) all are significantly lower than the ratios on fall seasonal sites (cf. 23MC56, and 23MC65). The ground hematite flake appears to be a fragment of a completed tool, but nothing can be said about the function of the tool.

The remainder of the recovered materials are lithic waste and unmodified stone. The percentages of local and non-local chert types were not calculated. Fire-cracked rock is by far the largest category of culturally altered materials. The large amount of fire-cracked rock indicates a heavy usage of stone for heat-retention in fire-related activities.

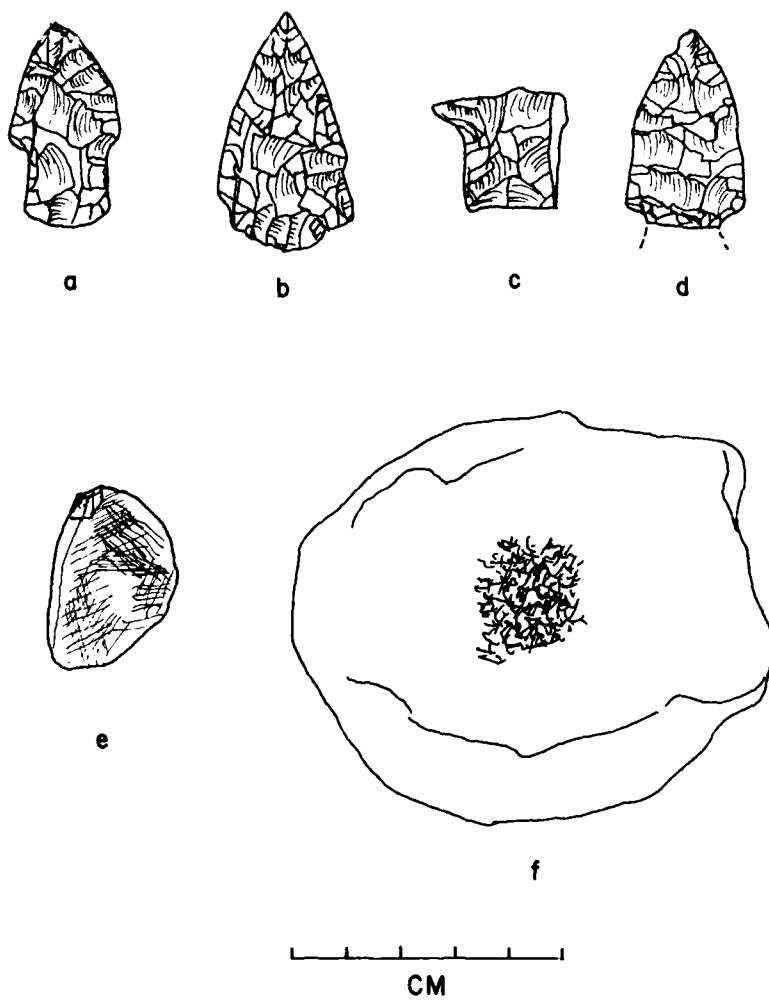


Figure 80. 23MC71. Artifacts

This site lies at the northern end of the low ridge which extends south of the ridge dividing the Long Branch and the East Fork. Slope edges near the site are steep. The East Fork flows along the western edge of the site. The size of the site is somewhat difficult to measure but is estimated to be 300 feet north-south by 100 feet east-west. The elevation of the site is 780-786 feet m.s.l. Vegetation consisted of oak-hickory forest. Surface material was collected from a two-track running along the eastern edge of the site. Visibility was poor to fair as considerable growth was beginning to cover the two-track.

We did not intend to conduct extensive excavations on the site. Prior testing indicated that the site had been heavily eroded and that deposits were relatively shallow. Although a considerable amount of lithic material had previously been recovered, diagnostic material (other than a few pieces of Woodland pottery) was lacking. This site along with 23MC71 and 23MC225 form a complex series of sites near the junction of the East Fork and the Long Branch. With an assessment of the temporal span, we believed that it might be possible to better understand the nature of this series of sites. As the site falls below the multipurpose pool, it was recommended that, due to its unique physiographic position, a limited testing program should be conducted in order to assess the nature of the site and its broader areal relationship.

As the area had apparently always been forested along the southwestern margin of the site, it was decided that excavations would proceed in arbitrary ten centimeter levels from the surface. Two, one and one-half meter squares were excavated on the site (Figure 81). Only a single ten centimeter level was excavated in each square. The area selected for excavations proved to be far more heavily eroded than the squares selected for excavation in 1975 (Grantham 1979). Due to the time constraints imposed, the site was placed on a lower priority.

No cultural stratigraphy was noted in the excavations. Deposits were fairly uniform throughout. The only physical stratigraphy noted was the result of soil horization. An A1-horizon extended from the surface to an average depth of three centimeters below the surface. A B1-horizon extended from that point to a depth of eight to ten centimeters below the surface. A B2t-horizon extended for an undetermined depth below that point.

23MC72

1978 EXCAVATIONS

ONE FOOT CONTOUR INTERVAL

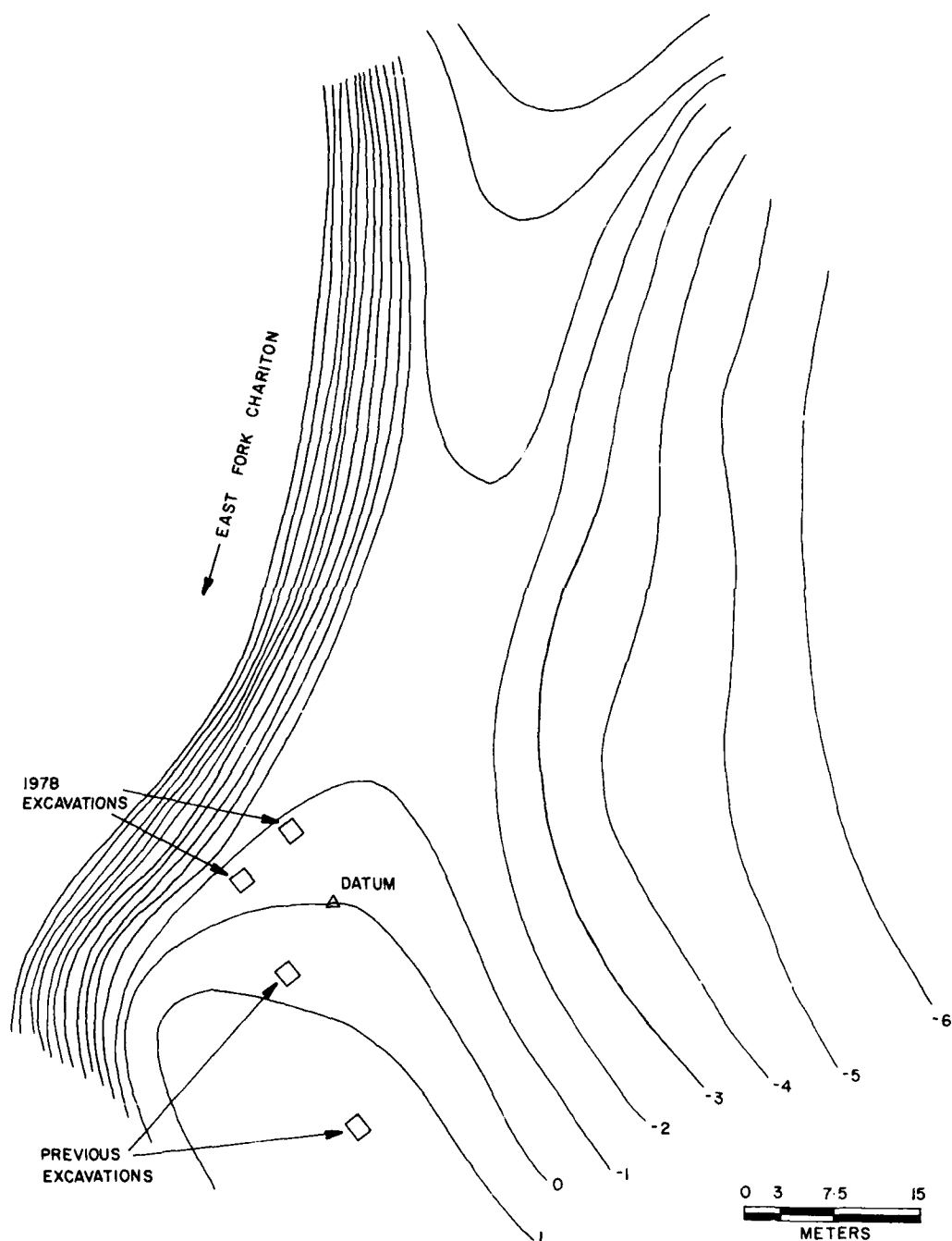


Figure 81. 23MC72. Site map and location of excavations.

Although the excavations had not reached a culturally sterile level, material density had rapidly decreased, and excavation had become exceedingly difficult. Previous excavations were more profitable in relative stratigraphy and areal distribution. Time limitations did not allow us to return to do any additional testing.

Description of Materials

Points

Group 47:a-b Distal Projectile Point Fragments - 2
(Figure 82, a-b)

Both specimens in this category are retouched flakes and exhibit only secondary pressure flaking. Flake scars are small, lamellar to slightly expanding, uneven in size, and inconsistent in distribution. Both specimens are fragments of relatively small points. Both specimens exhibit transverse stress fractures.

Cores

Group 80:a Nucleus - 1 (Figure 82, f)

The specimen in this category is a core which is nearly exhausted. The specimen exhibits flakes removed from the lateral margins in a somewhat irregular fashion. Flake sizes in the final stages before discard were relatively small. Flakes were struck off with considerable force. Secondary cortex is evident on one edge. The material is a local bedded chert.

Miscellaneous Worked Chert

Group 83:a Miscellaneous Worked Chert -1 (Figure 82, c)

The specimen in this category has been worked bifacially but lacks any readily discernible pattern in flaking. The specimen is relatively small and somewhat irregular in shape. The specimen does not appear to be a fragment of a tool. The chipping pattern is largely percussion flaking. Cortex is still present on two edges. There is no discernible wear on the edges.

Flake Tools

Group 86:a-b Utilized Flakes - 2 (Figure 82, d-e)

The specimens in this category are flakes which exhibit modification of the flake margins through utilization. Both specimens exhibit moderate to heavy utilization. One specimen (86:a) exhibits an acute angle along the utilized edge, while the other specimen exhibits a steep utilized edge. Both specimens exhibit bifacial-unilateral utilization along one lateral margin. Specimen 86:b exhibits unifacial-unilateral utilization on the distal end.

Ground/Pecked Stone

Group 95:a Ground and Battered Stone - 1 (Figure 82, g)

The specimen in this category exhibits grinding on both faces. Cortex removal is difficult to determine. The specimen exhibits polish on both of the ground faces. Striations are not readily visible. The specimen also exhibits heavy battering on one end and light battering on the opposing end. Wear consists of moderate to heavy edge crushing. Edge shattering is not present. Battered areas cover the entire ends. The heavily utilized end is broad and blunt, while the other end is narrower and follows a small ridge line. Battered edges have been created with moderate force and exhibits fairly distinct edge crushing. It would appear to have been utilized in direct contact with dense materials.

Ceramics

Pottery - 27

Sample: 27 highly eroded body sherds.

Group 126

Ceramics One: Sand tempered sherds

Sample: 9 highly eroded body sherds.

Paste:

Temper: Sand sized particles, predominantly quartz but with some plagioclase. Particles sizes are generally small (.1 to 1mm).

Texture: Paste is fairly friable with lamination roughly parallel to the interior/exterior surfaces. Temper constitutes only 5-15 percent of the total sherd volume.

Color: Color is fairly variable. Exterior colors are strong brown (7.5YR5/6) to reddish brown (5YR4/4). Interior colors are also variable and range from red (2.5YR4/8) to dark gray (10YR4/1).

Method of Manufacture: Uncertain due to the eroded condition of the sherds, but it would appear that vessels were lump modeled. There are no straight breaks indicative of coiling.

Surface Finish: Undetermined.

Decoration: Undetermined.

Form: Undetermined.

Group 128

Ceramics Three: Sand and grit tempered sherds.

Sample: 18 highly eroded body sherds.

Paste:

Temper: Some small sand sized particles, mainly quartz and plagioclase. Particles are highly rounded, with numerous larger (up to 4 mm) particles. A few of the larger particles are not highly rounded and appear to be crushed granitic materials.

Texture: Paste is fairly friable with lamination not always obvious but with lamination parallel to the interior/exterior surfaces. Sherds break irregularly. Temper constitutes 30-50 percent of the total paste volume.

Color: Color is fairly consistent, and sherds appear to be from a single vessel. Exterior color is yellowish red (5YR5/8) with interior color reddish brown (2.5YR4/4).

Method of Manufacture: Uncertain due to the eroded condition of sherds, but it would appear that vessels were lump modeled. There are no straight breaks indicative of coiling.

Surface Finish: Undetermined.

Decoration: Undetermined.

Form: Undetermined.

Group 133:a Burned Clay - 1

The specimen in this category is clay which has been fired intentionally or unintentionally. It differs from pottery in that it lacks temper. The specimen is highly eroded and irregular in shape.

Waste

Group 134: Chert Waste - 111

A total of seventy-two unmodified chert flakes and ten pieces of unmodified chert shatter were recovered from the excavations. Surface material included twenty-six unmodified chert flakes and three pieces of unmodified chert shatter.

Group 135: Quartzite Waste - 3

A single unmodified quartzite flake was recovered from the excavations. Surface material included two unmodified quartzite flakes.

Group 137: Silicified Sediments Waste - 2

Two unmodified silicified sediment flakes were recovered from the excavations.

Group 141: Fire-cracked Rock - 2,422

Fire-cracked rock is the term used for thermally altered stone. A total of 2,373 specimens were recovered in the excavations, and 49 pieces were recovered from the surface.

Group 142: Unmodified Stone - 217

The specimens in this category lack any apparent intentional or unintentional cultural modification. These appear largely to be residual materials which were unintentionally transported to the site.

Historic

Group 144:a Miscellaneous Historic Material - 1

A single piece of rusted unidentifiable iron was recovered from the excavations. There are no historic structures in the vicinity.

TABLE 35

Artifact Measurements and Attributes - 23MC72

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Points</u>						
<u>Distal Projectile Point Fragments</u>						
47:a	106	26*	13*	5*	1g*	distal fragment
47:b	105	15*	15*	2*	1g*	distal fragment
<u>Cores</u>						
<u>Nucleus</u>						
80:a	Sur.	43	38	13	24g	
<u>Miscellaneous Worked Chert</u>						
<u>Miscellaneous Worked Chert</u>						
83:a	104	31	31	16	14g	
<u>Flake Tools</u>						
<u>Utilized Flakes</u>						
86:a	104	25	13	7	1g	1 edge
86:b	106	34	25	10	6g	1 end
<u>Ground/Pecked Stone</u>						
<u>Ground and Battered Stone</u>						
95:a	Sur.	89	79	41	414g	Quartzite 2g, 2b

TABLE 36

DISTRIBUTIONAL SUMMARY - 23MC72

	47	80	83	86	95	128	133	134	135	137	141	142	144
Xu102,L.1	1	-	1	2	-	6	8	48	-	2	1246	154	1
Xu103,L.1	1	-	-	-	-	21	1	34	1	-	1101	63	-
Surface	-	1	-	-	1	-	-	29	2	-	75	-	-

The Site Assemblage: 23MC72

The material recovered does not lend itself well to interpretation of components present on the site or of site function. Previous surface collections (Grantham 1977) and testing of the site (Grantham 1979:199-203) recovered two unnotched triangular points and would tend to indicate a late component on the site, but the ceramics from the site indicate a Late Woodland component on the site. The projectile point fragments indicate hunting activities, but none of the fragments is diagnostic. Miscellaneous worked chert (Group 83) illustrates the use of local materials and was an attempt to work a blocky fragment of chert. Utilized flakes (Group 86) illustrates both cutting and scraping activities. Ground and battered stone (Group 95) indicates plant processing activities on the site.

Ceramics are unfortunately highly eroded. Both the sand-tempered (Group 126) and the sand-and-grit-tempered (Group 128) ceramics are similar to those recovered earlier on the site. Ceramics appear to be similar to Weaver wares in both paste, temper, and surface finish. Previous tests indicated surface finish in approximately equal numbers of cordmarked and smoothed exteriors. Although this would tend to indicate a late Middle Woodland to early Late Woodland occupation, the points and other tools recovered from the site indicate a Late Woodland occupation.

The remainder of the materials are waste materials. The percentages of local and non-local chert types was not calculated. Quartz waste and silicified sediments waste indicate the use of local materials. Fire-cracked rock is by far the largest category of culturally altered materials. The very large amount of fire-cracked rock indicates a heavy use of stone for heat-retention in fire-related activities. Little else can be said of the site assemblage.

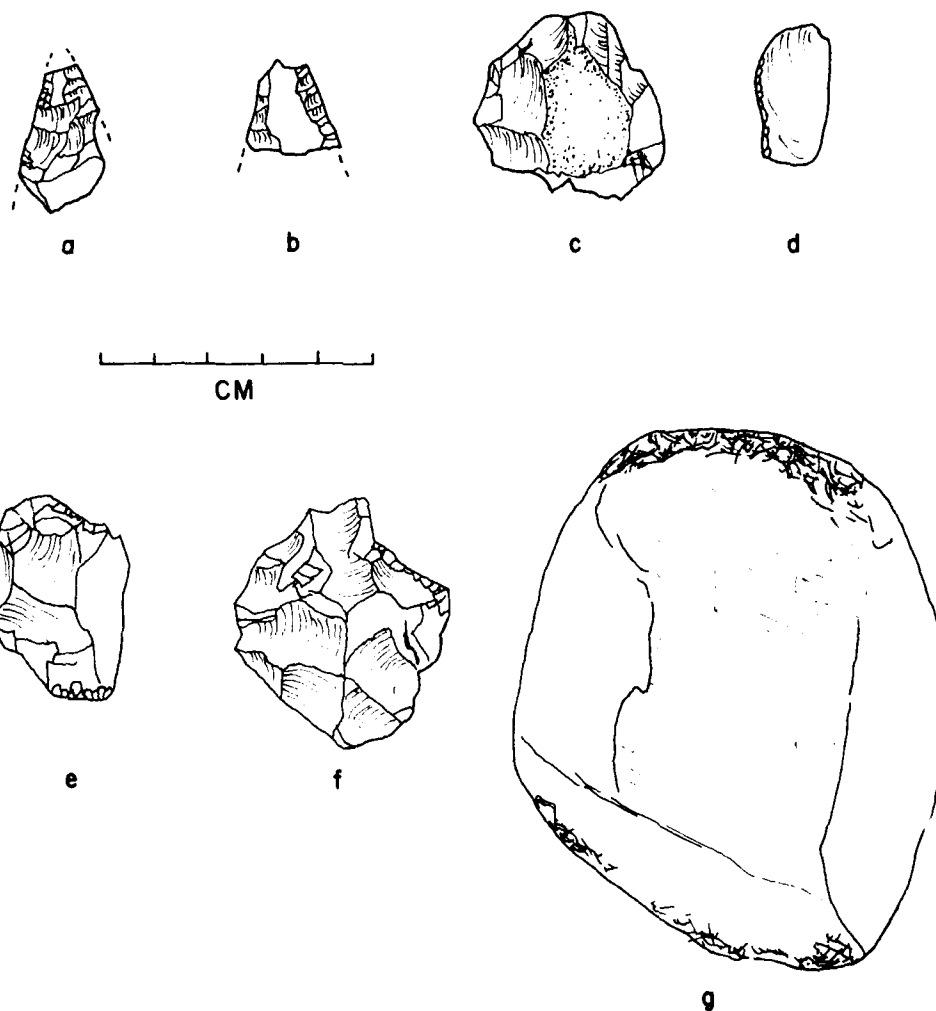


Figure 82. 23MC72. Artifacts.

This site lies on the right (west) bank of the East Fork just north and west of the confluence of the Long Branch and the East Fork. The site lies approximately 200 feet east of a gravel road. The site lies along the top of a hill which juts southward toward the juncture of the two rivers. The hill is cut along the eastern edge where an old meander loop cut laterally into the hill. Slopes are steep. The size of the site is estimated to be approximately 600 feet north-south by 250 feet east-west. The site lies at an elevation of 770-793 m.s.l. Vegetation was dense grass, and visibility was very poor. At the time of the initial survey, material was recovered from shovel tests only. At the time the site was tested, some vegetation had been removed when the site was cleared under the clearing contract. Bare areas were present near the southern and southeastern portions of the site. Surface material was recovered from these areas only. Material density appeared to be high.

We intended to test this site in order to collect data pertinent to temporal placement, subsistence base, areal extent, and cultural inventory. Although the site had been located in the summer of 1975 and rechecked in the summer of 1976, we still knew nothing about the site. A shovel test on the site had indicated a relatively dense deposit. The site lies immediately west of the juncture of the East Fork and the Long Branch. The truncated eastern edge of the hill indicates that the river flowed along that edge at one time. We wished to gather data pertinent to the above, and to get a sample of materials for density comparisons.

Although the site had been cleared, we did not know if the site area had been plowed. It was, therefore, decided that excavations would proceed in arbitrary ten centimeter levels from the surface. Two, one and one-half meter squares were excavated (Figure 83). A total of three, ten centimeter levels were excavated to a total depth of thirty centimeters below the surface.

No cultural stratigraphy with clear horizons was noted in the excavations, although deposits do appear to exhibit relative cultural stratigraphy. Deposits were fairly uniform throughout. The only physical stratigraphy was the result of soil horizonation. An Ap-horizon extended from the surface to a depth of approximately fifteen centimeters below the surface. A B1-horizon extended from that point to a depth of approximately twenty-eight centimeters below the surface. A B2-horizon extended below that point for an undetermined depth.

23MC73
1978 EXCAVATIONS
ONE FOOT CONTOUR INTERVAL

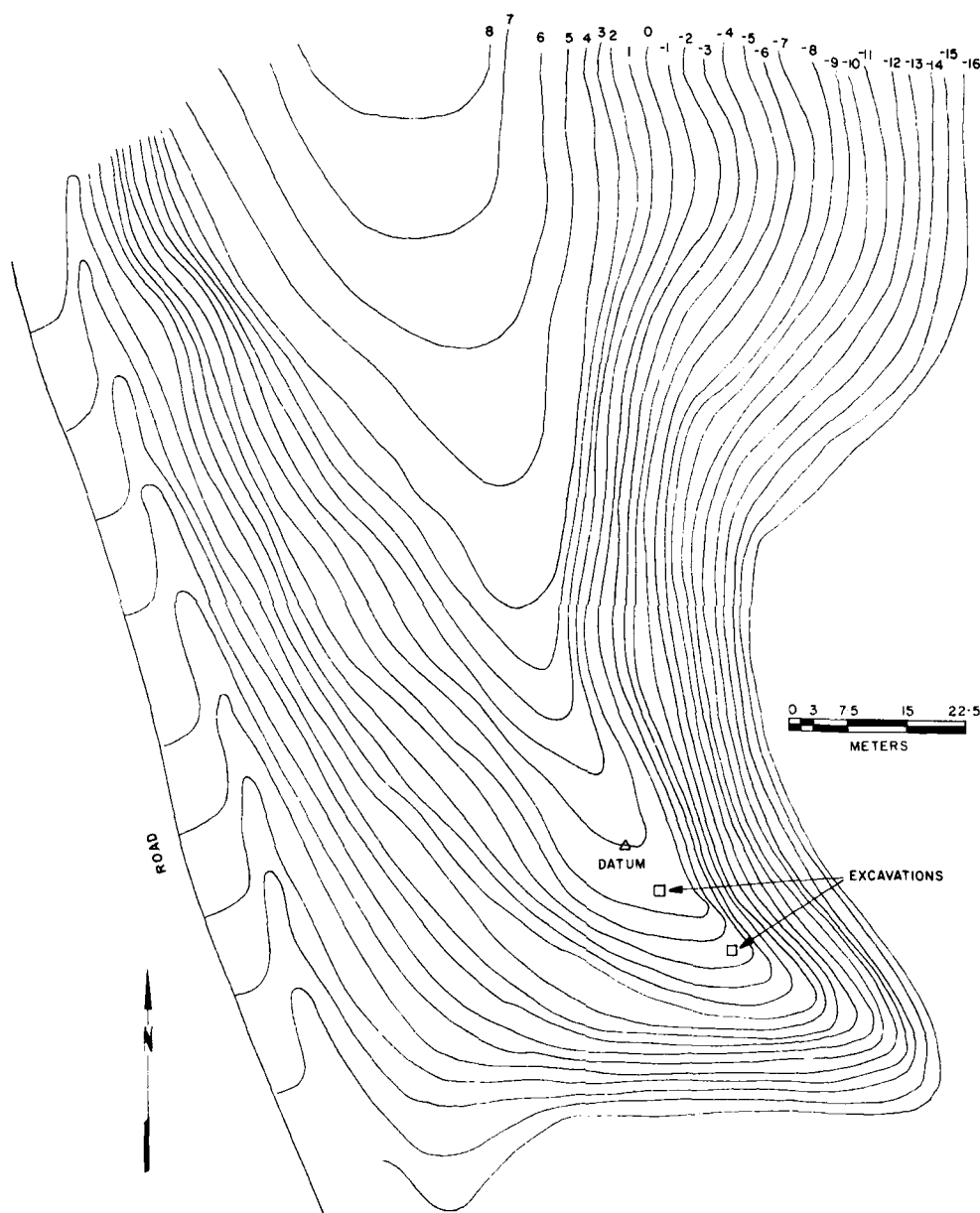


Figure 83. 23MC73. Site map and location of excavations.

Features

Feature 1

Only a small edge of this feature was encountered in the southwest corner of the excavation unit 103. The feature appears to have been conical although the greatest depth of the feature fell outside the excavation unit. The longest axis in the excavation unit was 18.1 centimeters and the width 11.2 centimeters. The greatest depth of the feature in the excavation unit was 7.8 centimeters. The feature exhibited a rather diffuse outline and was detectable only by the concentrated area of charred nutshells. Associated material included hazel (*Carya* sp.) and black walnut (*Juglans nigra*) charred nutshells, one piece of fire-cracked rock, and one ground and pecked cobble.

Description of Materials

Points

Group 49:a-b Projectile Point Shoulder Fragments - 2
(Figure 85, a-b)

The specimens in this category are fragments of projectile points, and both have only one remaining shoulder. Specimen 49:a is a small fragment and retains little of the blade and stem. The shoulder is an abrupt to slightly oblique shoulder. The specimen appears to have been from a medium to large point, and exhibits a compound transverse fracture across the blade and an oblique fracture through the notch. Specimen 49:b is larger and retains a fairly large segment of one lateral margin as well as the shoulder. The specimen appears to be a fragment of a relatively large point. The shoulder is abrupt. The specimen exhibits a longitudinal stress fracture.

Drill-like Implements

Group 54:a Narrow, Drill-like Implements - 1 proximal fragment (Figure 85, c)

The specimen in this category has a long, narrow working element. The working element is thick with the thickness approaching width. The specimen exhibits a straight slightly oblique base, rounded stem-base juncture, expanding stem, and a bi-convex cross-section. The chipping

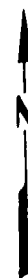
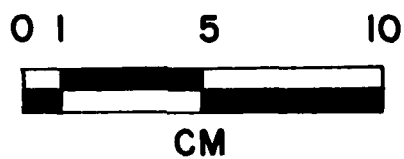
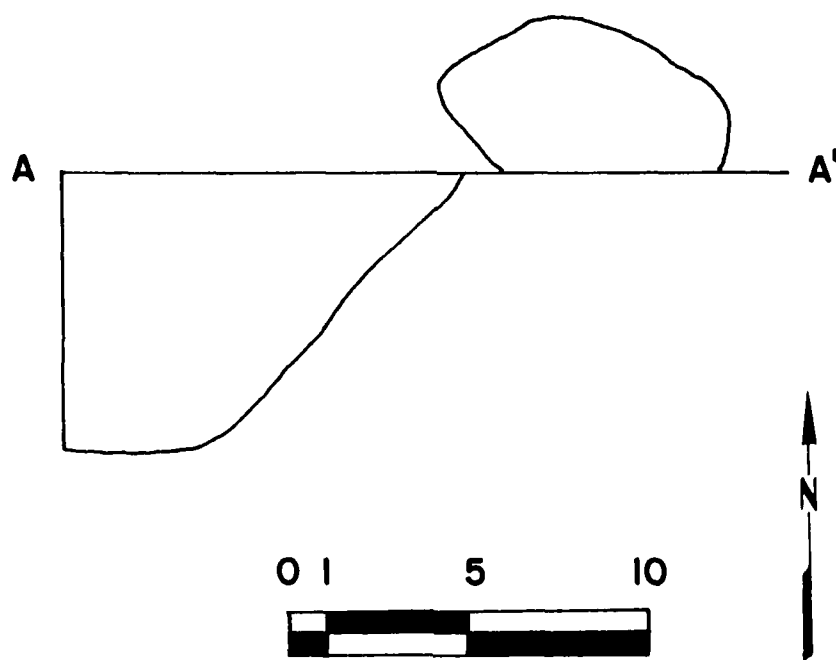
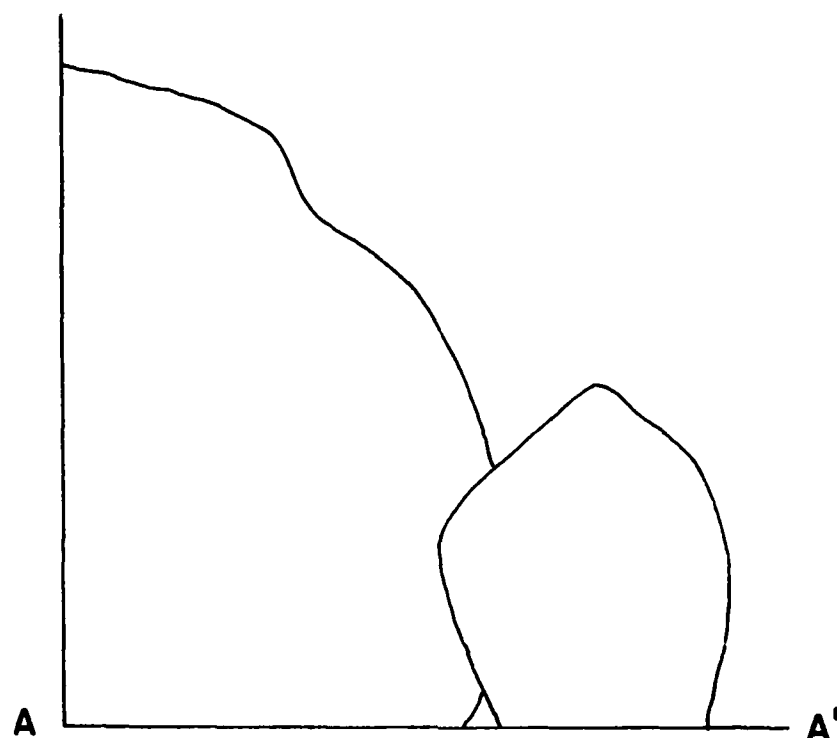


Figure 84. 23MC73. Feature 1.

pattern consists of primary percussion flaking with secondary pressure flaking along the lateral margins of the working element. The specimen exhibits little or no wear on the remaining portions of the lateral margins. It exhibits a transverse stress fracture.

Bifaces and Biface Fragments

Group 75:a Miscellaneous Thin Biface Fragment - 1

This category consists of a single thin biface fragment too small to be able to determine what type of tool is represented. It exhibits no external attributes which would allow its inclusion in any other category. The specimen exhibits primary and secondary flaking on one face, while the other face has been fractured. The specimen exhibits a compound fracture.

Cores

Group 78:a Chert Core Fragment - 1

The specimen in this category exhibits the external criteria of cores with one face representing a fracture along an internal fracture plane. The shape of the original core is undetermined. On the remaining core edge, flakes are removed in both directions from a single ridge. Flakes were removed by heavy percussion. The specimen is a local bedded chert.

Ground/Pecked Stone

Group 91:a Ground Stone - 1 (Figure 85, e)

The specimen in this category exhibits one face which has been culturally ground. The specimen exhibits sufficient cortex removal to reveal the interior color. It exhibits a fire-cracked spall which separated after final deposition.

Group 93:a Ground and Pecked Stone - 1 (Figure 85, f)

The specimen in this category exhibits one pecked and ground face. Pecking has resulted in a slight, fairly smooth depression on the face. The specimen lacks a definite pit. The degree of force appears to have been fairly light. The pecked area is centered on the face. The same face is also ground. The face has been heavily smoothed and the degree of grinding is fairly heavy.

Group 96:a Ground, Pecked, and Battered Stone - 1
(Figure 85, g)

The specimen exhibits one ground and pecked face and one battered end. The type of pecking on the face is heavy. Pecking has almost completely removed the cortex and revealed the darker interior color. The entire face was heavily pecked, apparently with considerable force. The purpose of the latter modification is uncertain, but it appears to have been done to roughen the surface for better grinding. The surface exhibits grinding which has planed off the high points of the battered surface. The specimen exhibits heavy battering on one end. The battered area is continuous all along one edge. Wear consists of fairly heavy edge crushing. It was apparently utilized with direct contact with dense materials.

Hematite

Group 123:a Scratched Hematite - 1
(Figure 85, d)

The specimen in this category consists of a single piece of altered hematite. It exhibits one scratched face. The face is longitudinally concave. It exhibits scratches parallel to the longitudinal axis of the concavity as well as some perpendicular to the longitudinal axis. Striations are variable in depth with groups of striations. The scratches were produced by a tool with a slightly sinuous edge. A chipped stone tool was the most probable agent for scratching the surface. The specimen was fire-cracked after modification.

Ceramics

Pottery - 1 smooth body sherd and 18 highly eroded body sherds.

Group 126

Ceramics One: Sand tempered sherds.

Sample: 6 highly eroded sherds.

Paste:

Temper: Sand-sized particles, predominantly quartz. Particles are highly rounded. Particles are small (.1 to .5 mm).

Texture: Paste is fairly friable, but lamination is not readily apparent. Temper constitutes 5-10 percent of the total sherd volume. Temper constitutes such a low volume that it is barely detectable in the sherds from the third level of excavation unit 103.

Color: Color is fairly variable. Exterior colors are strong brown (7.5YR5/6) to reddish yellow (5YR5/8). Interior colors range from reddish brown (2.5YR4/4) to dark gray (5YR4/1) and black (5YR2/1).

Method of Manufacture: Uncertain due to the eroded condition of the sherds. It would appear that vessels were lump modeled, as there are no straight breaks indicative of coiling.

Surface Finish: Undetermined.

Decoration: Undetermined.

Form: Undetermined.

Group 128

Ceramics Three: Smooth, sand and grit tempered sherds.

Sample: 1 smooth body sherd and 12 highly eroded body sherds.

Paste:

Temper: Some small sand sized particles, mainly quartz but with some plagioclase. Particles are highly rounded. Particles are generally small (.1 to 1 mm) with some larger (up to 2 mm) particles. Most of the larger particles (up to 5 mm) are not highly rounded and appear to be crushed granitic materials.

Texture: Paste is fairly friable with lamination roughly parallel to

the interior/exterior surfaces.
Sherds break irregularly.
Temper constitutes 30-40 percent
of the total paste volume.

Color: Color is fairly consistent, and
sherds appear to represent a
single vessel. Exterior color
is yellowish red (5YR5/8) with
interior color reddish brown
(25YR4/4) to brownish gray
(10YR5/2).

Method of Manufacture: Uncertain due to the
eroded condition of the sherds
but it would appear that vessels
were lump modeled. There are
no straight breaks indicative
of coiling.

Surface Finish: The single uneroded sherd
exhibits a smoothed exterior.
There are two fine grooves on
the sherd interior but these
are impressions made during
modeling. They are not incised
lines.

Decoration: Undetermined.

Form: Undetermined.

Lithic Waste

Group 134: Chert Waste - 225

A total of 173 unmodified chert flakes and fifteen
pieces of unmodified chert shatter were recovered from the
excavations. Surface material included thirty-five
unmodified chert flakes and one piece of unmodified chert
shatter.

Group 135: a-c Quartzite Waste - 3

A single unmodified quartzite flake and one piece of
unmodified quartzite shatter were recovered from the
excavations. A single quartzite flake was recovered from
the surface.

Group 139: Argillite Waste - 1

A single argillite flake was recovered from the excavations.

Group 141: Fire-cracked Rock - 8,714

Fire-cracked rock is the term utilized for thermally altered stone. All material comes from the excavations.

Group 142: Unmodified Stone - 2,974

The specimens in this category lack any intentional or unintentional cultural modification. These appear largely to be residual materials which were unintentionally transported to the site.

Historic

Group 144:a-j Miscellaneous Historic Material - 13

A small amount of historic material was recovered from the near-surface of excavation unit 103. Material includes bottle glass, nails, brick, lead, unidentified iron fragments, cinder, and coal. The material is probably associated with the residential site on the northern edge of the site.

TABLE 37
Artifact Measurements and Attributes - 23MC73

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks	
<u>Points</u>						
<u>Projectile Point Shoulder Fragments</u>						
49:a	111	8*	15*	5*	2g*	shoulder fragment
49:b	Sur.	27*	13*	6*	1g*	shoulder fragment
<u>Drill-like Implements</u>						
<u>Narrow, Drill-like Implement</u>						
54:a	108	25*	19	8	3g*	proximal fragment
<u>Ground/Pecked Stone</u>						
<u>Ground Stone</u>						
91:a	109	97	78	48	524g	Argillite lg
<u>Ground and Pecked Stone</u>						
93:a	106	82	75	47	435g	Argillite lp, lg
<u>Ground, Pecked, and Battered Stone</u>						
96:a	110	102	100	52	792g	Gabbro lp, lg, lb
<u>Hematite</u>						
<u>Scratched Hematite</u>						
123:a	111	51	31	8	22g	1 scratched face

TABLE 38
DISTRIBUTIONAL SUMMARY - 23MC73

	49	54	75	78	91	93	96	123	128	134	135	139	141	142	144
Xul02,L.1	-	-	-	-	-	-	-	-	6	62	-	1	1895	467	-
L.2	-	-	-	-	-	-	-	-	5	74	1	-	2238	714	1
L.3	1	-	-	-	-	-	-	1	6	2	-	-	892	677	-
Xul03,L.1	-	-	-	-	-	-	-	-	-	30	1	-	2206	116	10
L.2	-	1	-	-	-	1	-	-	-	21	-	-	1307	664	2
L.3	-	-	-	-	1	-	1	-	-	-	-	-	177	336	-
Surface	1	-	1	1	-	-	-	-	-	36	1	-	-	-	-

The Site Assemblage: 23MC73

The material recovered from the site does not lend itself well to the interpretation of components present on the site or site function. The projectile point fragments indicate hunting activities, but the two shoulder fragments are not diagnostic. The drill-like implement (Group 54) indicates piercing activities or use as a reamer. Unfortunately, the specimen is only a proximal fragment and exhibits little or no wear. The biface fragment (Group 75) appears typical on most sites in the area. Fragmentary tools indicate the long use-life for tools and heavy reuse of tools until too fragmentary to be useable. The core fragment in Group 78 exhibits the use of local raw materials.

The ground and pecked stone in Groups 91, 93 and 96 were all in close association with Feature 1. The ground and pecked cobble (Group 93) was on top of the feature and was in direct association with the feature. The ground stone (Group 91) and the ground, pecked, and battered stone (Group 96) were located near but not in direct association with the feature. All specimens appear to be connected with plant processing. The specimen in Group 123 was scratched with a tool. The grouped deep and shallow striations indicate the use of a chipped stone tool on the surface. The reason for the modification was apparently for pigment.

The ceramics (Groups 126 and 128) are not particularly informative. Almost all specimens are highly eroded. Both the sand-tempered and sand- and grit-tempered ceramics are similar to those recovered on a number of sites in the area. These ceramics are to be similar to Weaver wares in both paste, temper, and surface finish. Weaver wares range from late Middle Woodland through Late Woodland.

The remainder of the materials are waste materials. The percentages of local and non-local chert types were not calculated. Quartzite waste and argillite waste indicates the use of local materials. Fire-cracked rock is by far the largest category of culturally altered materials. The large amount of fire-cracked rock indicates a heavy use of stone for heat-retention in fire-related activities. Little else can be said of the site assemblage.

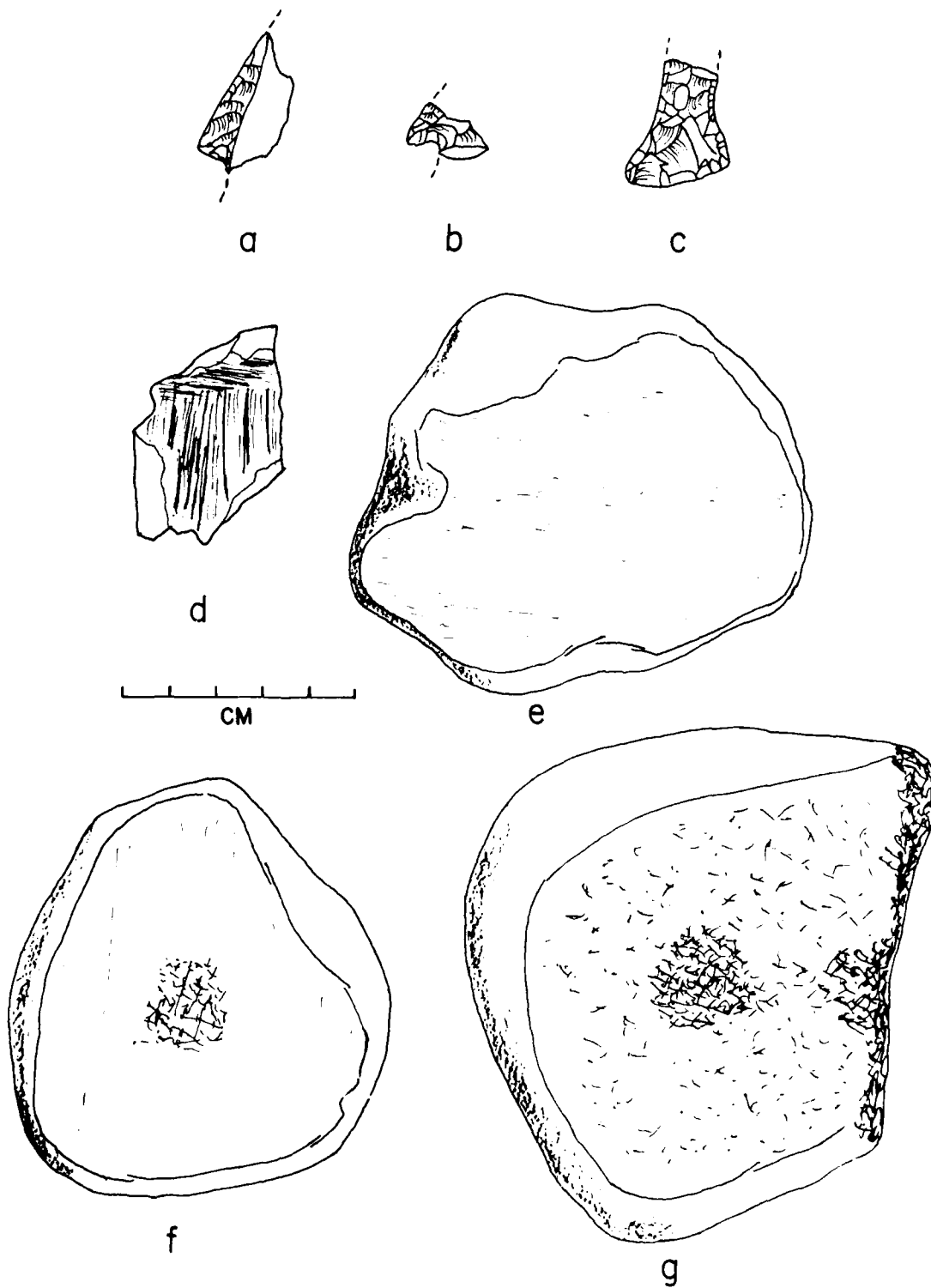


Figure 85. 23MC73. Artifacts.

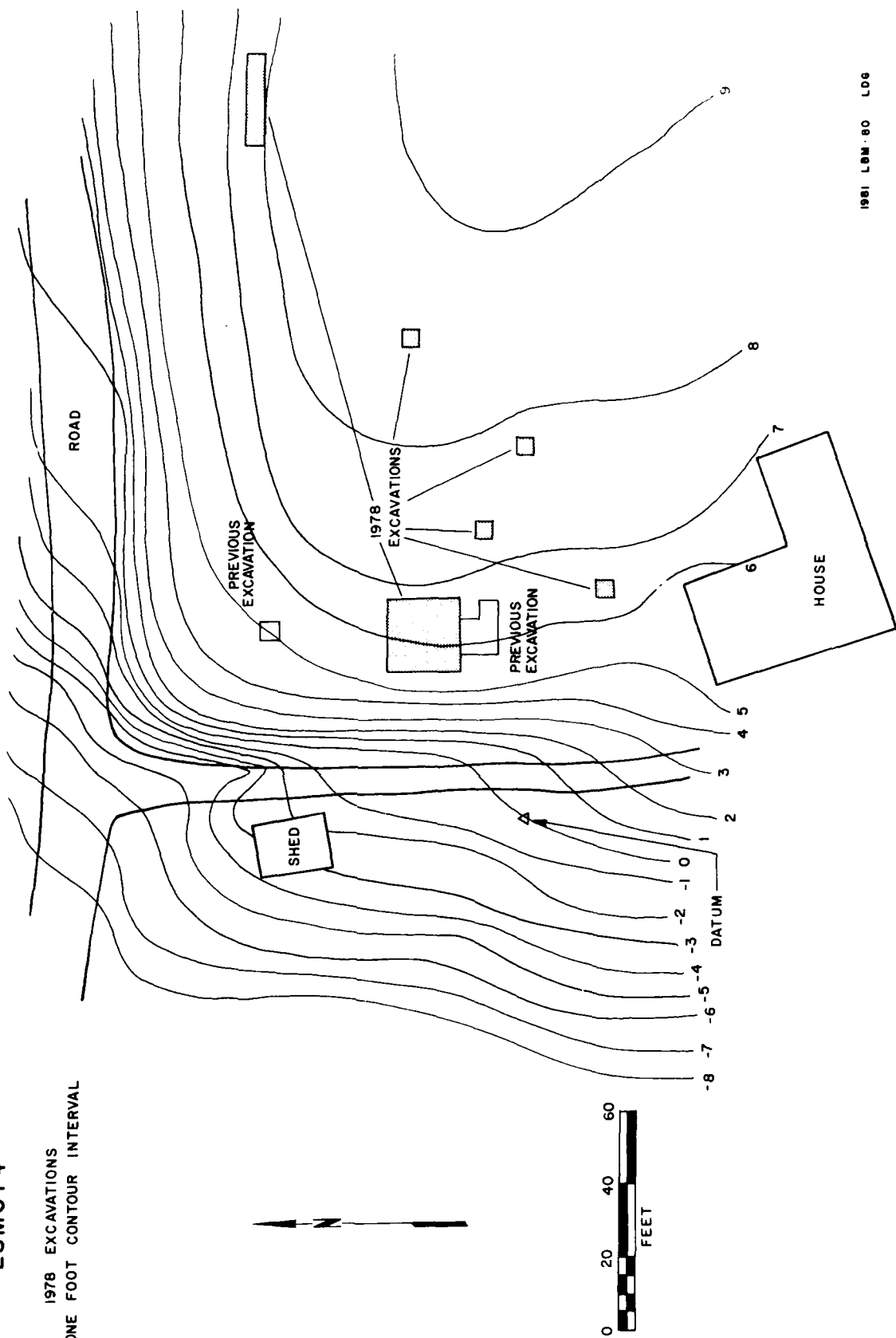
This site lies on the left (east) bank of the East Fork approximately 500 feet southwest of the confluence of the Long Branch with the East Fork. The river originally flowed along the northern edge of the site, and hill slopes are steep. Hill slopes are moderately steep along the western edge of the hill indicating that the river once flowed along that hill margin as well. There is a deep draw along the southern edge of the site. The size of the site is estimated to be approximately 500 feet east-west by 400 feet north-south. The elevation of the site is 775-794 m.s.l. The site is divided by a dirt road. At the time of the survey, vegetation north of the road was primary forest. Vegetation south of the road consisted of tall grass and weeds. Material density was high. The portion north of the road was undisturbed, but after clearing the upper six to eight inches had been disturbed. Much of the southern portion of the site was the front yard of a house and was in an excellent state of preservation. At the time of the excavations on the site, surface material was collected only from the area north of the road. The portion south of the road was in a better state of preservation.

This site was selected for excavation on the basis of the components present on the site, site function, and the physiographic setting of the site. The site is one of the few deep undisturbed sites in the area. The site lies at the margin of a large soil area which appears to have developed under prairie conditions. It also lies immediately adjacent to the large floodplain area at the confluence of the Long Branch and the East Fork. Earlier excavations on the site indicated that the site was the only recorded large seasonal site with an Early/Middle Woodland component with a major emphasis on hunting and less on gathering.

Thirty-four, one and one-half meter squares were excavated during the 1978 field season (Figure 86). Originally an additional twenty, one and one-half meter excavation units were laid out in the eastern part of the site. When these excavation units proved to have deep plowzones with very shallow subplowzone deposits, the remaining squares were not excavated. Four test squares were scattered between this block and the 1975 excavations on the site. The deepest and best preserved segment of the site proved to be in the immediate vicinity of the 1975 excavations. The main block of excavation units was placed immediately north of the 1975 excavations. This block excavation was 7 1/2 meters square.

23MC74

1978 EXCAVATIONS
ONE FOOT CONTOUR INTERVAL



1981 LHM 80 L06

Figure 86. 23MC74. Site map and location of excavations.

In the eastern block of excavation units, the plowzone was removed as a single unit. This level varied only slightly averaging approximately fifteen centimeters. A single arbitrary ten centimeter level was excavated below the plowzone before sterile soil was reached to a total depth of twenty-five centimeters below the surface. Depth of deposits increased rapidly to the west. West of the eastern blocks of excavations, deposits had not been plowed. These excavation units were excavated in arbitrary ten centimeter levels. In the main excavation blocks and south of the 1975 excavations, at least four, ten centimeter levels were excavated. In the northwestern corner of the excavation block and in tests south of the 1975 excavation, five, ten centimeter levels were excavated.

No cultural stratigraphy with clear horizons was noted in the excavations, although deposits do exhibit relative cultural stratigraphy. Deposits were fairly uniform throughout. The only physical stratigraphy was the result of soil horizonation. An A1-horizon extended from the surface to a depth of approximately twelve centimeters below the surface. A B1-horizon extended from that point to a depth of approximately forty to forty-five centimeters below the surface. A B2-horizon extended for an undetermined depth below that point.

Features

Feature 3

Feature 3 was originally partially excavated in 1975 (Grantham 1979). The feature consisted of a tight concentration of fire-cracked rock. The feature extended into the 1978 excavations in excavation unit 3050. The feature was roughly circular in horizontal outline. The feature extended approximately one meter into excavation unit 3050 with the longest axis northwest-southeast. The greatest depth of the feature was approximately twenty centimeters. No pit outline was detectable. The fire-cracked rock is not scattered, and pieces fitting together are in immediate proximity to each other. Thus, it is felt that the feature represents a roasting pit rather than the remains of stone boiling. It is probable that the feature was opened and that ash, charcoal, and even the pit outlines were subsequently removed through natural mechanisms. Associated material included fire-cracked rock and fire-cracked ground and pecked stone.

23MC74

1978 EXCAVATIONS
MATERIAL DISTRIBUTION

C	Chert	Pkd	Pecked Stone
BF	Biface Fragment	Grnd	Ground Stone
CF	Core Fragment	EBC	End Battered Cobble
Ch.H	Chipped Hematite	G.SS	Ground Sandstone
Ch.C	Chipped Cobble	MPS	Multiple Pitted Stone

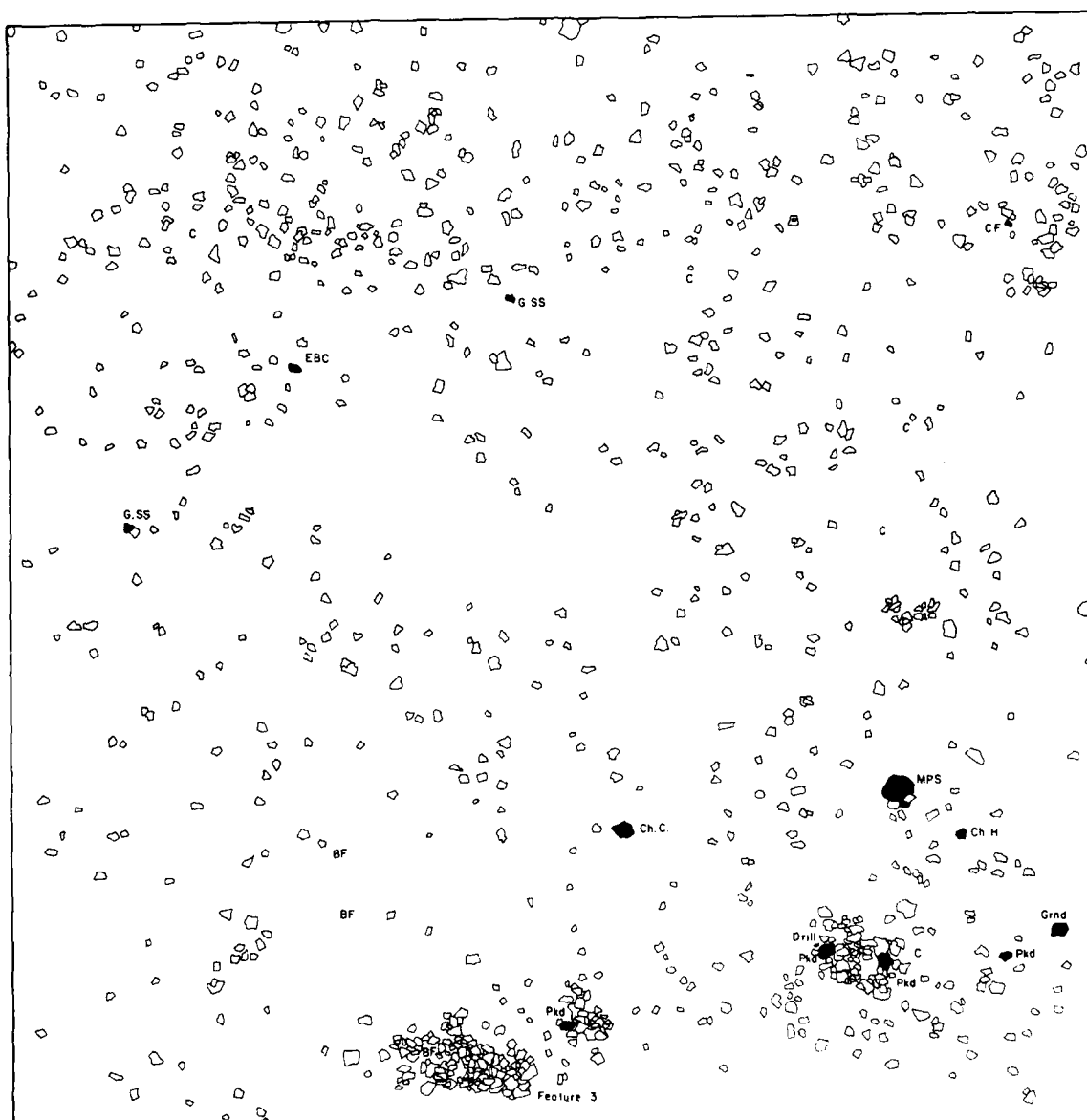
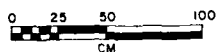


Figure 87. 23MC74. Distributional Map.

Description of Materials

Points

Group 1:a Contracting-Stemmed Point - 1 (Figure 88, a)

The specimen in this category exhibits a straight base, contracting stem, abrupt shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary pressure flaking. Primary flake scars are large, generally expanding, uneven in size, and fairly consistent in distribution. Secondary flake scars are medium in size, generally lamellar, uneven in size, and inconsistent in distribution. The specimen exhibits little or no resharpening. The blank material is difficult to determine but appears to have passed through a preform stage due to the presence of heavy primary flake scars. The specimen exhibits a deep impact fracture removing only the very end but extends for one-half the blade distance down one face.

Group 12:a Concave-based, Side-notched Point - 1 proximal fragment (Figure 88, e)

The specimen in this category exhibits a concave base, square stem-base juncture, deep side notches, and a bi-convex cross-section. It is no longer possible to determine if primary flaking was present, as only the base remains. The specimen does exhibit secondary pressure flaking. Secondary flake scars are generally small, lamellar, uneven in size, and inconsistent in distribution. The specimen appears to have passed through a preform stage based on the relative thickness. The specimen exhibits a transverse stress fracture across the notches and an oblique compound fracture from one notch through the base.

Group 25:a Straight-based, Expanding-stemmed Point - 1 proximal fragment (Figure 88, d)

The specimen in this category exhibits a straight base, expanding stem, abrupt to slightly oblique shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary and tertiary flaking. Primary flake scars have largely been obscured by subsequent flake scars. Secondary flake scars are small, lamellar to expanding, uneven in size, and inconsistent in distribution. The specimen exhibits heavy resharpening. Tertiary flake scars are small, lamellar, fairly even in size, and inconsistent in

distribution. Resharpening has almost completely removed the shoulders, and it appears that the specimen was originally corner-notched. The blank material is difficult to determine but appears to have passed through a preform stage based on the presence of primary flaking. The specimen exhibits a transverse stress fracture.

Group 26:a Convex-based, Corner-notched Point - 1
(Figure 88, b)

The specimen in this category exhibits a convex base, expanding-stem, oblique shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary and tertiary pressure flaking. Primary flake scars have largely been obscured by subsequent flaking. Secondary flake scars are small, lamellar to expanding, uneven in size, and inconsistent in distribution. Resharpening has heavily modified the blade. Tertiary flake scars are small, lamellar, uneven in size, and inconsistent in distribution. Blank material appears to have passed through a preform stage based on the relative thickness. The specimen exhibits a small impact fracture.

Group 27:a Large, Straight-based Corner-notched Point - 1
(Figure 88, c)

The specimen in this category exhibits a straight base, expanding stem, broad deep corner-notches, extended oblique shoulders, irregular blade margins, and a bi-convex cross-section. The chipping pattern consists of primary percussion and secondary pressure flaking. The specimen exhibits a small area of primary flaking in the center of both faces. Secondary flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. The specimen appears to have been fractured and then heavily modified. It still retains the secondary flaking on one lateral margin. The other lateral margin was heavily reworked by percussion after the fracture in an attempt to repair the damage. Blank material appears to have passed through a preform stage based on flaking pattern.

Group 45:a Unclassified Projectile Point Base - 1
(Figure 88, f)

The specimen in this category exhibits a straight base, rounded stem-base juncture, an expanding stem, and a bi-convex cross-section. The specimen lacks sufficient criteria to include it in any other category. The basal configuration is similar to the point in Group 25. The

specimen exhibits only secondary flaking on the remaining portion. It exhibits a transverse stress fracture and a percussion fracture from the base, which has removed most of the base.

Group 47:a-e Distal Projectile Point Fragments - 5

The specimens in this category vary considerably in size from small segments to almost entire blades. All specimens, except for specimen 47:e, appear to be from relatively large points. These specimens were worked by percussion and pressure flaking. Specimen 47:e has been worked predominantly by pressure flaking. All specimens exhibit transverse stress fractures. Specimen 47:d also exhibits a small impact fracture and a small oblique fracture from one lateral margin through the transverse stress fracture. Specimens 47:a and 47:d exhibit heavy resharpener of the lateral margins.

Group 48:a-c Medial Projectile Point Segments - 3

The specimens in this category lack both proximal and distal ends. All three specimens appear to be from fairly large points. Specimen 48:a contains the notches, and both shoulders and the base are broken. It originally had oblique shoulders and was probably corner-notched, based on the direction of the flake removal in the notches. Specimens 48:b and 48:c are medial segments only. These specimens are not as carefully worked and exhibit less secondary edge trimming. All exhibit both primary and secondary flaking. Specimen 48:a exhibits transverse stress fractures across the notches and through both shoulders, while the distal fracture is a compound fracture. Specimens 48:b and 48:c exhibit two transverse stress fractures.

Group 49:a-d Projectile Point Shoulder Fragments - 4

The specimens in this category all have only one remaining shoulder. Specimens 49:a, 49:b, and 49:c are fragments of weakly oblique to oblique shoulders. Specimen 49:d is a fragment of an oblique shoulder with a square stem-blade juncture. Specimen 49:a exhibits a percussion fracture; specimens 49:b and 49:c exhibit oblique stress fractures; and specimen 49:d exhibits a transverse stress fracture across the blade and a longitudinal stress fracture from the transverse fracture through the notch.

Scrapers

Group 51:a End Scraper Made From a Flake - 1 distal fragment (Figure 88, g)

The specimen in this category was manufactured on a flake. Only the distal working element is represented. The specimen exhibits steep, careful retouch. The specimen exhibits heavy wear consisting of edge crushing, edge rounding, and polish. Based on the remaining portion, the scraper was probably roughly circular. The specimen exhibits slight heat discoloration and has a thermal fracture.

Drill-like Implements

Group 54:a-b Drill-like Implements - 1 distal fragment, 1 medial fragment (Figure 88, h-i)

The specimens in this category have long, narrow working elements. The working elements on both specimens are thick with the thicknesses approaching widths. Specimen 54:a has a rounded working element, rather than the more typical pointed working element. This would place it morphologically more similar to a reamer than a drill, if we use the criteria outlined by Winters (1967). The chipping pattern consists largely of secondary pressure flaking. Specimen 54:a exhibits light edge rounding on the distal end, and little or no wear on the lateral margins. Specimen 54:b exhibits light edge rounding and flake scar abrasion on the lateral margins. Specimen 54:a exhibits a transverse stress fracture, and specimen 54:b exhibits a transverse lateral stress fracture and a compound fracture.

Bifaces and Biface Fragments

Group 72:a Distal Fragment - Thin, Broad, Pointed Biface - 1 (Figure 88, j)

The specimen in this category exhibits slightly convex lateral margins, a slightly pointed distal end, and a bi-convex cross-section. The chipping pattern consists of primary flaking with slight secondary edge trimming. The specimen does not appear to be a fragment of a completed tool. It exhibits a transverse stress fracture.

Group 75:a-n Miscellaneous Thin Biface Fragments - 14

This category consists of miscellaneous thin biface fragments too small to be able to determine what kind of tool they represent. Most of the specimens (eleven) exhibit

TABLE 39

Chert Tools

Artifact Measurements and Attributes - 23MC74

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks	
<u>Projectile Points</u>						
<u>Contracting-stemmed Point</u>						
1:a	Sur.	59*	29	8	14g*	impact fracture
<u>Concave-based, Side-notched Point</u>						
12:a	3029	28*	29*	6*	5g*	basal fragment
<u>Straight-based, Expanding-stemmed Point</u>						
25:a	Sur.	34*	30	8	8g*	proximal fragment
<u>Convex-based, Expanding-stemmed Point</u>						
26:a	Sur.	34	27	9	8g	
<u>Large, Straight-based, Corner-notched Point</u>						
27:a	Sur.	38	38	10	12g	
<u>Unclassified Projectile Point Base</u>						
45:a	4188	26*	11*	5	1g*	basal fragment
<u>Scrapers</u>						
<u>End Scraper Made from a Flake</u>						
51:a	3027	25*	8*	9*	1g*	distal fragment
<u>Drill-like Implements</u>						
<u>Narrow, Drill-like Implements</u>						
54:a	4056	28*	10	6	3g*	distal fragment
54:b	Sur.	17*	9	7	1g*	medial fragment
<u>Bifaces and Biface Fragments</u>						
<u>Distal Fragment Thin, Broad, Pointed Biface</u>						
72:a	3202	37*	22*	9*	6g*	distal fragment

primary and secondary flake scars and careful edge trimming. Some may have been resharpened but is not readily detectable on any of the specimens. Three specimens exhibit primary flaking only and lack careful edge trimming. The specimens vary considerably in size and fracture patterns.

Group 76:a-e Miscellaneous Thick Biface Fragments - 5

This category consists of miscellaneous thick biface fragments too small to be able to determine what type of tools they represent. They exhibit no external attributes other than bifacial working which would allow their inclusion in any other category. The chipping pattern varies considerably. Three specimens (76:a, 76:c, and 76:d) exhibit primary flaking with very slight or no secondary flaking. One specimen (76:b) exhibits primary and secondary flaking with careful edge trimming to produce a straight edge. One specimen (76:e) exhibits primary flaking as well as secondary flaking. The specimen has also been heavily resharpened. The specimens vary considerably in size and fracture patterns.

Cores

Group 78:a Chert Core Fragment - 1

The specimen in this category is a fragment of a core. It exhibits all the external criteria of cores as well as one face representing a stress fracture. The shape of the original core is uncertain. On the remaining core edge, flakes are removed in both directions from a single ridge. It is doubtful that it was originally part of a polyhedral core.

Group 80:a-d Chert Nuclei - 4

The specimens in this category include chert cores which have been exhausted. All appear originally to have been polyhedral cores. Two of the specimens still retain small areas of cortex. Two of the specimens are glacial chert and the other two are of local bedded chert.

Group 81:a Chert Core with Flat Striking Platform - 1

This specimen is a tabular piece of chert with flakes removed down the thickness from a single striking platform. Flakes were removed in a fairly regular fashion. The specimen is a local bedded chert.

Flake Tools

Group 84:a-d Retouched Flakes - 4

The specimens in this category exhibit intentional modifications of the flake margins by additional flake removal. All of the specimens are fragmentary. Three specimens are fragments of lateral margins, and one is a distal fragment. Three specimens (84:a, 84:b, and 84:d) have steep-angled, unifacial retouch. Specimen 84:c exhibits acute-angled, unifacial retouch. All are broken in such a way that determination of the number of ends and/or edges retouched is impossible. They exhibit a variety of fracture patterns.

Group 86:a-n Utilized Flakes - 14

Specimens in this category exhibit utilization in the form of minute flake removal along the flake margin through utilization. The number of complete flakes or relatively complete flakes constitutes over one-half of the total (eight). Of the incomplete flakes, three are proximal fragments (contain the bulb of percussion) and three are lateral fragments. All specimens, except 86:a, have at least one acute working element. Three specimens have two acute working elements. Specimen 86:l exhibits one steep working element, and specimen 86:n exhibits one steep working element on the alternate edge from the acute working element. Utilization is unifacial-unilateral on six specimens, bifacial-bilateral on two specimens, bifacial-unilateral on one specimen, and unifacial-bilateral on two specimens. Three specimens are too fragmentary to determine if the one utilized edge was the only utilized edge. Two of these exhibit unifacial utilization, while the other specimen exhibits bifacial utilization.

Ground and Pecked Stone

Group 90:a-g Pecked Stone - 7 (Figure 89, a-f)

These specimens exhibit pecking on one or both faces of the stone. None of these specimens exhibit pits, and none have been used heavily or for a protracted period of time. All exhibit one lightly pecked face. Two specimens are complete; the remainder are fire-cracked. The degree of force is not heavy. The pecked areas are fairly centered on the faces. In almost all cases, the cortex has been pecked away, and the interior color of the stone contrasts sharply with the surrounding cortex color.

TABLE 40
Cores and Flake Tools
Artifact Measurements and Attributes - 23MC74

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Cores</u>						
<u>Chert Nuclei</u>						
80:a	3488	40	31	20	16g	
80:b	4190	44	43	31	41g	
80:c	Sur.	50	36	28	30g	
80:d	3029	42	22	13	22g	
<u>Chert Core with Flat Striking Platform</u>						
81:a	3762	57	50	23	111g	
<u>Flake Tools</u>						
<u>Retouched Flakes</u>						
84:a	3029	14*	10*	5*	1g*	1 end
84:b	3450	20*	12*	5*	1g*	1 edge?
84:c	4242	29*	10*	8*	1g*	1 edge?
84:d	3620	25*	16*	6*	2g*	1 edge?
<u>Utilized Flakes</u>						
86:a	3521	21	20	6	2g	2 edges
86:b	3054	12*	11*	3*	1g*	1 edge?
86:c	3522	24*	19*	4	3g*	1 edge
86:d	3450	28*	27	8	5g*	1 edge
86:e	3305	40	54	14	28g	2 edges
86:f	3154	11*	9*	3*	1g*	1 edge?
86:g	4245	29	17	5	2g	2 edges
86:h	3764	29	16	5	2g	1 edge
86:i	3056	28	24	8	4g	1 end
86:j	Sur.	26	17	6	2g	1 edge
86:k	Sur.	38	31*	8	9g*	1 edge
86:l	Sur.	32*	27	6	6g*	1 end
86:m	Sur.	26*	12*	4*	2g*	1 edge?
86:n	Sur.	24*	20	4	3g*	2 edges

Group 91:a-f Ground Stone - 6 (Figure 90, a-f)

The specimens in this category exhibit at least one face which has been ground. Sufficient cortex has been removed to reveal the interior color. Most exhibit relatively fine striations which are generally multi-directional. One specimen (20:a) exhibits moderate to heavy polish along higher areas on the surfaces. Only one specimen is relatively complete. All six specimens are fire-cracked and are fragmentary. It is quite possible that some of the fragmentary tools in this category may represent fragments of more complex tools.

Group 92:a Battered Cobble - 1 (Figure 93, c)

The specimen in this category exhibits battering on both ends of the cobble. Wear consists of moderate edge-crushing. It appears that it was used with direct contact with dense materials, based on the degree of edge damage. Battered areas exhibit moderate to heavy edge crushing, and battered marks exhibit crumbling along the outer edges.

Group 93:a-f Ground and Pecked Stone - 6 (Figure 91, a-f)

These specimens exhibit one or more faces which have been ground and one or more faces which have been pecked. Three specimens exhibit one ground and pecked face; one specimen exhibits two ground faces and one pecked face; and two specimens are too fragmentary to determine if the alternate face was ground and/or pecked. Two specimens have been fire-cracked.

Group 96:a-b Ground, Pecked, and Battered Stone - 2
(Figure 93, a-b)

The specimens in this category exhibit one or more ground faces, one or more pecked faces, and one or more battered ends or edges. Battering varies considerably. Specimen 96:a exhibits heavy edge damage (both edge crushing and edge shattering) and was utilized in direct contact with dense materials. Specimen 96:b, however, exhibits light edge damage and lacks the edge shattering of specimen 96:a. The type of edge damage is quite similar to the facial pecking. Stone materials are generally fine-grained. Both of the specimens are heavily utilized. Specimen 96:a exhibit two pecked faces, one ground face, and two battered edges. Specimen 96:b exhibits two pecked faces, two ground faces, one battered end, and two battered edges.

TABLE 41
Ground/Pecked Stone
Artifact Measurements and Attributes - 2300 B.C.

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Ground Pecked Stone</u>					
<u>Pecked Stone</u>					
90:a	3929	117	79*	29	341g* Quartzite 1p
90:b	4014	109*	43*	43*	215g* Argillite 1p
90:c	2005	80*	70*	24*	141g* Argillite 1p?
90:d	2005	84	53	33	213g Argillite 1p
90:e	3802	79*	69*	26*	137g* Flint Hill Sandstone 1p?
90:f	3920	80*	77*	33	216g* Flint Hill Sandstone 1p?
90:g	Sur.	47*	46*	42*	132g* Felsite 1p?
<u>Ground Stone</u>					
91:a	4006	92*	66	44*	306g* Quartzite 1g?
91:b	Sur.	93*	68*	19*	97g* Argillite 1g?
91:c	Sur.	49*	38*	44*	90g* Argillite 1g
91:d	4167	89*	28*	37*	95g* Felsite 1g?
91:e	2012	64*	61*	25*	82g* Argillite 1g?
91:f	Sur.	56*	35*	28*	47g* Argillite 1g?
<u>Battered Stone</u>					
92:a	2008	76	58	43	147g Quartzite 2b
<u>Ground and Pecked Stone</u>					
93:a	Sur.	100	96	58	557g Quartzite 1p, 1g
93:b	Sur.	112	87	47	490g Argillite 2p, 1g
93:c	Sur.	108	86	48	518g Argillite 1p, 1g
93:d	3029	98	62	48	313g Argillite 1p, 1g
93:e	4054	69*	44*	13*	40g* Argillite 1p?, 1g?
93:f	4230	34*	34*	26*	29g* Argillite 1p?, 1g?
<u>Ground, Pecked, and Battered Stone</u>					
96:a	1164	130	67	48	448g Argillite 2p, 1g, 2b
96:b	Sur.	110	64	45	354g Argillite 2p, 2g, 3b
<u>Ground Sandstone, Small, Flat</u>					
101:a	4235	58*	53*	15*	35g* Flint Hill Sandstone 2 Facets
101:b	3259	33*	28*	24*	20g* Flint Hill Sandstone 1 Facet
<u>Chipped Gabbro Cobble</u>					
104:a	4064	112	92	41	498g Gabbro 1 end
<u>Multiple-pitted Stone</u>					
109:a	3769	161	158	71	2200g Flint Hill Sandstone 3 pits, 3 pkd
<u>Utilized Fire-cracked Rock</u>					
110:a	Sur.	93*	68*	19*	97* Argillite
110:b	2012	64*	61*	25*	82* Argillite
110:c	4054	69*	44*	13*	40* Argillite

Group 101:a-b Ground Sandstone, Small, Flat - 2
(Figure 93, d-e)

The specimens in this category are both local Flint Hill sandstone. Both specimens exhibit smooth, lightly striated surfaces. Specimen 24:a has two smoothed facets on the surface with a slight ridge dividing the two facets. Striations run at about a forty-five degree angle from the dividing ridge, and both sets of striations are unidirectional. Specimen 24:b exhibits a single ground surface. Striations are also readily apparent on the ground surface and are unidirectional. Both specimens are fire-cracked.

Group 104:a Chipped Gabbro Cobble - 1 (Figure 92, b)

The specimen in this category is a gabbro cobble which exhibits cortex on only one remaining surface. The specimen was first fire-cracked, as the two faces and two edges of the cobble are interior surfaces but show no evidence of percussion flaking. One end was subsequently modified by the removal of a number of flakes. This produced a highly sinuous edge. The edge of the tool has been utilized, as the subsequent edge exhibits considerable edge rounding. The nature of the tool is uncertain.

Group 109:a Multiple-pitted Stone - 1 (Figure 92, a)

The specimen in this category exhibits multiple deep pits on both faces of the stone. These pits range from shallow to very deep (up to 15 mm). There are two deep pits and three shallower pits on one face, and three deep pits and two shallower pits on the opposite face. Pits range from thirty to thirty five millimeters in diameter. The degree of force was relatively heavy and differs from Group 90. Although often labeled nutting stones morphologically, the wear in the pits indicates contact with dense materials. The nature of the material (sandstone) is less dense than the specimens in Group 90, but this does not appear sufficient to warrant the difference in wear.

Group 110:a-c Utilized Fire-cracked Rock - 3
(Figure 93, f-h)

The specimens in this category consist of thin fragments of fire-cracked rock which have been modified through utilization. This modification consists of light edge crushing and flake removal. Flake removal from the edges is light and occurs on both faces. The utilized edges are acute. The specimens were used in a cutting motion.

Hematite

Group 117:a-e Chipped Hematite - 5 (Figure 94, c-d, f-g)

There are four specimens in this category. Only a single specimen (117:b) exhibits bifacial-bilateral flaking which may have been part of a tool-shaping process. The other three specimens exhibit flakes removed from the edges, but all are highly irregular in shape and do not appear to have been part of a tool-shaping process.

Group 118:a Ground Hematite - 1 (Figure 94, a)

The specimen in this category exhibits a single edge with light grinding. The ground edge occurs near the juncture of the face and the edge. Striations are fine and largely unidirectional. Striations are roughly parallel to the longest axis of the edge. The specimen was ground on a fine-grained abrasive.

Group 119:a-u Hematite Flakes - 21

Hematite flakes exhibit the same criteria as any percussion flakes. Most of the flakes have cortical dorsal surfaces and are decoration flakes.

Group 120:a Chipped and Ground Hematite - 1 (Figure 94, h)

This category consists of chipped and ground hematite. There is one specimen in this category. The specimen exhibits bifacial-bilateral working which has largely been obscured by the subsequent grinding and wear. Chipping extends around the entire outer margins of the remaining portion of the tool. The specimen exhibits light grinding along the chipped portion of the specimen, largely near one edge. The amount of grinding on the rest of the tool is slight. The specimen exhibits heavy wear along the ground edge in the form of heavy edge rounding. Wear has almost faceted the edge. Wear extends up the edges for approximately one centimeter. It would appear that the specimen represents the distal fragment of a small celt or adze-like tool.

Group 121:a-e Ground Hematite Flakes - 5 (Figure 94, i-m)

Specimens in this category are hematite flakes with ground dorsal faces. The dorsal faces exhibit ground surfaces. Specimens exhibit fine, multidirectional striations. Specimen 121:d exhibits heavier coarser striations as well as fine striations. Specimen 121:d

TABLE 42

Hematite

Artifact Measurements and Attributes - 23MC74

	Cat. No	Length	Width	Thickness	Weight (gm)	Remarks
<u>Hematite</u>						
<u>Chipped Hematite</u>						
117:a	Sur.	22	15	7	5g	
117:b	Sur.	42	37	13	41g	
117:c	4013	59	50	12	41g	
117:d	2014	35	22	12	17g	
117:e	3029	29	27	17	29g	
<u>Ground Hematite</u>						
118:a	4245	28	22	13	13g	1 Facet
<u>Ground and Chipped Hematite</u>						
120:a	2012	24	23	10	9g	
<u>Ground Hematite Flakes</u>						
121:a	3450	16	13	2	1g	
121:b	4114	15	12	2	1g	
121:c	4150	30	28	7	7g	
121:d	4018	11	10	2	1g	
121:e	3764	11	9	1	1g	
<u>Scratched Hematite</u>						
123:a	3247	34	28	3	6g	1 Face

exhibits multiple flake scars on the dorsal face as well as grinding. All were ground on a fine-grained abrasive.

Group 122:a Utilized Hematite - 1 (Figure 94, e)

The specimen in this category exhibits bifacial-bilateral flaking but appears to have been performed for edge sharpening. The specimen exhibits subsequent utilization along the edges. Wear consists of heavy edge rounding.

Group 123:a Scratched Hematite -1 (Figure 94, b)

The specimen in this category exhibits one face which exhibits deeper coarser striations than ground hematite. Striations are multi-directional and grouped. It appears that the surface was shaved with a chipped stone tool.

Ceramics

Pottery - 15

Sample: 15 highly eroded body sherds

Group 128

Ceramics Three: Sand and grit-tempered.

Paste:

Temper: Highly rounded, sand-sized particles, mainly quartz and plagioclase with a small amount of grit temper. Sand particles are generally very small (.1 to .5 mm). Grit particles are relatively large (2 to 3 mm).

Texture: Paste is slightly friable to relatively compact. Lamination is absent. Sherds break irregularly.

Color: Color ranges from light reddish brown (5YR6/3) to light brownish gray (10YR6/2) to black (5YR2/1).

Method of Manufacture: Undetermined.

Surface Finish: Undetermined.

Decoration: Undetermined.

Form: Undetermined.

Group 133:a-r Burned Clay - 18

The specimens in this category are clay which had been fired intentionally or unintentionally. They differ from pottery in that they generally lack temper. Only one specimen contains temper (specimen 133:m) but is too thick and irregular to be pottery. All specimens are eroded and irregular in shape. Two specimens are convex-concave and are suggestive of stick impressions. It is probable that some of the material represents daub. One specimen (133:n) contains a terrestrial gastropod (Gastrocopta contracta) embedded in the clay.

Lithic Waste

Group 134: Chert Waste - 1263

A total of 946 unmodified chert flakes, 174 pieces of unmodified chert shatter, and two chert potlids were recovered from the excavations. Surface material included 119 unmodified chert flakes and 22 pieces of unmodified chert shatter.

Group 135: Quartzite Waste - 11

A total of six unmodified quartzite flakes and two pieces of quartzite shatter were recovered from the excavations. Three pieces of unmodified quartzite shatter were recovered from the surface.

Group 136: Quartz Waste - 1

A single quartz flake was recovered from the excavations.

Group 137: Silicified Sediments Waste - 1

A single unmodified piece of silicified sediments shatter was recovered from the excavations.

Group 139: Argillite Waste - 5

Five argillite flakes were recovered from the excavations.

Group 141: Fire-cracked Rock - 48,932

Fire-cracked rock is the term used for thermally altered stone. Only eighty-six specimens were recovered from the surface, with the remainder coming from the excavations.

Group 142: Unmodified Stone - 1,808

The specimens in this category lack intentional or unintentional cultural modification. These include largely residual materials which appear to have been unintentionally transported to the site.

Historic

Group 144: Miscellaneous Historic Materials - 1,011

As the main block of excavations were conducted in the front yard of an historic structure, large quantities of historic material were expected. Materials include large quantities of cinder, burned shale, and iron but encompasses a wide variety of materials.

Distributional Summary - 23MC74

Surface

TABLE 43 (cont'd)
Distributional Summary - 23MC74

		109	110	117	118	119	120	121	123	128	133	134	135	136	137	139	141	142	144
Xu2000	L.1	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	269	26	179
	L.2	-	-	-	-	1	-	-	-	-	-	26	-	-	-	-	739	28	54
	L.3	-	-	-	-	-	-	-	-	-	-	52	1	-	-	2	1098	38	-
	L.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	10	-
Xu2002	L.1	-	-	-	-	1	-	-	-	-	1	130	-	1	1	1	7117	217	122
	L.2	-	-	-	-	-	-	-	-	-	-	72	-	-	-	-	5263	70	14
Xu2009	L.1	-	-	-	-	-	-	-	-	1	-	8	-	-	-	-	319	28	74
	L.2	-	-	-	-	-	-	-	5	1	20	-	-	-	1	1	694	59	28
	L.3	-	-	-	-	1	-	-	-	-	-	13	1	-	-	-	723	75	5
	L.4	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	298	64	7
	L.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	3	-
Xu2010	L.1	-	1	-	-	-	1	-	-	1	2	36	2	-	-	1	1583	69	44
	L.2	-	-	1	-	-	-	-	-	1	5	60	-	-	-	-	1343	78	75
	L.3	-	-	-	-	-	-	-	-	-	1	23	-	-	-	-	164	15	5
	L.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
Xu3001	L.1	-	-	-	-	1	-	-	-	-	-	25	-	-	-	-	1215	20	2
	L.2	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	113	5	-
Xu3002	L.1	-	-	-	-	-	-	-	-	3	-	26	-	-	-	-	1446	60	4
	L.2	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	172	10	-
Xu3003	L.1	-	-	-	-	1	-	-	-	1	1	31	-	-	-	-	1818	60	5
	L.2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	66	3	-
Xu3004	L.1	-	-	1	-	-	-	-	-	-	-	28	1	-	-	-	2316	65	-
	L.2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	219	10	-
Xu3005	L.1	-	-	-	-	1	-	-	-	1	-	22	1	-	-	-	2065	62	2
	L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	306	12	-
Xu3037	L.1	-	-	-	-	-	-	-	-	-	-	3	1	-	-	-	309	10	14
	L.2	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	379	16	11
	L.3	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	275	13	3
	L.4	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	25	16	4
Xu3038	L.1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	271	12	5
	L.2	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	571	13	3
	L.3	-	-	-	-	-	-	-	-	-	1	5	-	-	-	-	171	12	-
	L.4	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	33	4	-
Xu3039	L.1	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	261	6	15
	L.2	-	-	-	-	1	-	-	-	-	-	7	-	-	-	-	471	19	7
	L.3	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	355	10	2
	L.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92	8	-
Xu3040	L.1	-	-	-	-	-	-	-	-	-	1	4	-	-	-	-	286	6	8
	L.2	-	-	-	-	-	-	1	-	-	-	19	-	-	-	-	507	14	-
	L.3	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	526	22	-
	L.4	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	50	5	-
	L.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xu3041	L.1	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	160	10	25
	L.2	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	431	15	?
	L.3	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	195	21	-
	L.4	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	28	12	-
Xu3042	L.1	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	274	14	35
	L.2	-	-	-	-	1	-	-	-	-	-	9	-	-	-	-	525	12	2
	L.3	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	107	9	-
	L.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	2	-
Xu3043	L.1	-	-	-	-	1	-	-	1	-	-	10	-	-	-	-	354	10	8
	L.2	-	-	-	-	1	-	1	-	-	-	21	-	-	-	-	636	27	-
	L.3	-	-	-	-	-	-	1	-	1	-	8	-	-	-	-	381	28	-
	L.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	4	-
Xu3044	L.1	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	406	13	12
	L.2	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	680	20	1
	L.3	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	638	21	1
	L.4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	86	12	-
Xu3045	L.1	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	164	11	12
	L.2	-	-	-	-	-	-	-	-	-	1	8	-	-	-	-	352	14	-
	L.3	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	234	20	4
	L.4	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	35	13	-
Xu3046	L.1	-	-	-	-	-	-	-	-	-	1	4	-	-	-	-	182	6	12
	L.2	-	-	-	-	1	-	-	-	-	-	11	-	-	-	-	395	12	4
	L.3	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	160	25	2
	L.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	7	-
Xu3047	L.1	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	314	22	10
	L.2	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	451	14	-
	L.3	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	228	11	-
	L.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	4	-
Xu3048	L.1	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	458	16	7
	L.2	-	-	-	-	1	-	-	-	1	-	22	-	-	-	-	601	26	1
	L.3	-	-	1	-	1	-	1	-	-	-	20	-	-	-	-	393	17	-
	L.4	-	-	-	-	1	-	-	-	-	-	7	-	-	-	-	109	11	-
Xu3049	L.1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	177	10	12
	L.2	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	328	18	1
	L.3	-	-	-	1	-	-	-	-	-	-	8	1	-	-	-	286	16	1
	L.4	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	45	19	-
Xu3050	L.1	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	161	5	3
	L.2	-	-	-	-	-	-	1	-	-	-	9	-	-	-	-	436	10	-
	L.3	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	419	16	-
	L.4	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	53	10	-
Xu3051	L.1	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	456	14	15
	L.2	-	-	-	-	-	-	-	-	-	1	14	-	-	-	-	861	18	-
	L.3	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	435	10	-
	L.4	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	87	12	-
Xu3052	L.1	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	345	16	87
	L.2	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-	667	15	66
	L.3	-	1	-	-	-	-	-	-	-	-	9	-	-	-	-	873	15	1
	L.4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	90	6	-
Surface		-	1	2	-	-	-	-	-	-	-	141	1	-	-	-	86	3	-

The Site Assemblage: 23MC74

The specimen in Group 1 is similar to the type Langtry. Langtry points are found in a variety of contexts. Roper (1977:52) notes that they are common in Woodland contexts throughout southwest Missouri and southeastern Kansas. Marshall (1972:93) recorded the dates A.D. 780±80 and A.D. 970±80 from the area of the Infinity site where a large number of both Gary and Langtry points were recovered. Chomko (1976:32; Fig. 16, f-i) notes their presence in ceramic contexts at the Phillips Spring site and that their presence there did not occur prior to 1990 B.P. Falk (1969:85) and Lippincott (1972:47) also note the association with ceramic contexts and suggested a time span of A.D. 1-1000. Shippee (1967:33) notes their presence in large numbers at the Shields site and judged them to be Early Woodland. The basis for such an assignment is not, however, stipulated. Their presence in northeastern Missouri is noted by Henning (1961:142). Suhm and Krieger (1954) estimated the chronological range to be from 2000 B.C. to A.D. 1600. Ahler (1971:15) notes similar points from Stratum 2 at Rodgers Shelter. Stratum 2 is bracketed by radiocarbon dates of 6300±590 B.P. near the upper boundary and 7490±170 B.P. to 8100±140 B.P. near the lower boundary (Ahler 1971:6). Although classed as Hidden Valley Stemmed points (Scully 1951:5), some of the specimens are quite similar to Langtry points. The ability to distinguish between types is probably variable and would account for the wide chronological spread. Their use as chronological aids is somewhat limited, although they appear to be dominantly from ceramic contexts. Their presence in this assemblage is not out of line.

The specimens in Groups 25, 26, and 27 exhibit basal morphologies from straight to very slightly convex. Specimens are nearest to the type Norton (White 1968) in Illinois. The type is relatively rare in Middle Woodland components in the Kansas City area (Shippee 1967: Fig. 34, k,l) although the slightly convex based varieties are dominant. Bell (1976) also indicates that the type is relatively rare in assemblages in the Kansas City area. Reeder (1978:Pl. 3, j) illustrates somewhat comparable material from the Sohn site in the Kansas City area. The type is rare in the Big Bend and lower Lamine River localities along the Missouri River (Kay 1975). The type is more common in northern Missouri (O'Brien and Warren 1979:238) in the Salt River valley. Similar points were recovered from the Middle Woodland component at the Pigeon Roost Creek site. The weighted mean of radiocarbon dates was A.D. 232±90 for the three dates on the level. The type

fits well with White's (1968:71) estimated chronological range of mid-Middle Woodland.

The specimen in Group 12 is similar to a common type in northern Missouri. The type was recovered at a number of sites in the area (23MC55, 23MC56, 23MC65). These specimens are apparently part of the Big Sandy Complex. The type is common in Middle Archaic contexts in northern Missouri (O'Brien and Warren 1979). Radiocarbon dates from the Pigeon Roost Creek site averaged 3960 ± 168 B.C. for the upper cluster and a mean date of 4394 ± 92 B.C. for the lower cluster (O'Brien and Warren 1979:236). Both this level and a lower undated level separated by sterile soil contained only Big Sandy complex points. Although this lower level was postulated as being Middle Archaic as well, it is possible that it represents an Early Archaic component. Side-notched forms occur throughout the Archaic in Iowa from 8500-4500 B.P. and led Anderson and Shutler (1974) to propose a "Prairie Archaic" period characterized by side-notched forms. It appears that Anderson and Shutler's (1974) proposed "Prairie Archaic" may be present throughout most of northern Missouri for the Early/Middle Archaic periods.

The specimen in Group 45 is too fragmentary to be particularly informative. It is, however, quite similar to the point in Group 25 and is probably part of the Middle Woodland component. The projectile points recovered indicate that there is really only a single component on the site. Specimens in Groups 1, 25, 26, 27, and probably 45 are part of a Middle Woodland component. The specimen in Group 12 is out of line with the other materials recovered on the site. Earlier excavations on the site (Grantham 1979:350-368) recovered three points which indicated a Middle Woodland component and one side-notched, straight-based point similar to the specimen in Groups 25 and 26. Surface collections on the site (Grantham 1977) included one Steuben Stemmed point and one Koster Corner-notched point, as well as a lobed-based point. The two side-notched points and the lobed-based point recovered would tend to argue for an Early/Middle Archaic component on the site, but all were recovered from the surface or in disturbed contexts. It does not appear that such a component is represented in the areas tested. There is a thin Late Woodland component based on the single projectile point and the pottery present in near-surface contexts. The bulk of the deposits belong to the Middle Woodland component on the site.

The relative stratigraphy is not easily defined in these excavations, as the number of temporally diagnostic

tools recovered in the excavations was limited. Earlier excavations (Grantham 1979) indicated a relatively straight-forward stratigraphy. All of the points recovered in those excavations were Middle Woodland. Based on ceramics, there appeared to be a thin Late Woodland component present in the A-horizon. The only point recovered in the western test area of this seasons excavations was the specimen in Group 45. Although somewhat questionable, it is believed to be part of the Middle Woodland component.

The number of projectile point fragments is not particularly informative. The number of distal point fragments is only slightly lower than the number of proximal and medial point fragments. Specimen 48:a appears to be a fragment of a corner-notched point, and most of the specimens in Group 49 appear to be fragments from corner-notched points. The number of projectile points does give a good indication of the relative importance of hunting in the economy. The flake scraper in Group 51 indicates that scraping activities occurred, but the relative incidence is very low. The drill-like implements in Group 54 indicate another activity on the site. Specimen 54:a is closer in morphology to a reamer, but wear is present only on the distal end and appears to have been a drill based on wear. Specimen 54:b is only a medial fragment but exhibits wear on the lateral margins and was used in a rotary motion. Their number is relatively low in light of the total number of tools.

All bifaces are highly fragmentary. The specimen in Group 72 is to be a blank fragment or a preform fragment. The large number of miscellaneous biface fragments (Groups 75 and 76) as well as the fragmentary nature of almost all chert tools illustrates a long use-life for tools and heavy reuse of tools until too fragmentary to be useable.

Flake tools (Groups 84 and 86) are not numerous when compared with the large numbers of other tools and the greater number of such incidental tools common in other areas. The number of flake tools from the site is not high when compared with other sites in the area. Three of the four retouched flakes exhibit steep retouch and indicates that scraping activities were dominant. Most of the chert flakes larger than one-half inch have been utilized or retouched.

The presence of chert cores and fragments (Groups 78, 80, and 81) indicate the use of local sources of raw material. The number of these is relatively low and indicates that little reliance was placed on local sources of materials. The amount of chert waste, quartzite waste, quartz waste, and silicified sediments waste is relatively low for sites in the area. The use of the latter three types of stone also indicates the use of local materials. Again, however, their number is relatively low compared with chert waste. Chert flakes are generally quite small and are characterized by a preponderance of biface thinning, trimming, and retouch flakes. Some sixty-five to seventy percent of the chert waste has a non-local point of origin.

As with most of the sites in the area, ground and pecked stone constitutes the majority of the recovered tools. Seventy-six percent of the total morphologically recognizable tools belong to this class. Specimens in Groups 90, 91, 93, 96 and 109 appear to be tools connected with plant processing. Some of these tools may have been utilized for other functions as well. Some wear is heavier and more indicative of direct contact with dense materials, but the principal modifications were connected with plant processing. The specimen in Group 92 has been utilized in direct contact with dense materials. The specimens in Group 101 exhibit flat, smooth, striated faces or facets and have been utilized to grind the surface of other tools. The specimens in Group 110 represent incidental tools much the same as utilized flakes. Specimens were not intentionally modified prior to utilization. Specimens are thin and exhibit relatively light edge damage. These have been utilized in a cutting motion. The specimen in Group 104 was chipped as part of a tool-shaping process. The specimen was utilized after flaking and exhibits edge rounding. The nature of the function of the tool is uncertain, but the degree of edge damage would tend to indicate that it was used as an axe.

Hematite (Groups 117, 118, 119, 120, 121, 122, and 123) has been altered for a variety of purposes. The single ground specimen (Group 118) has been ground for pigment, and the specimen with the scratched surface (Group 123) also has been modified for pigment. The specimens in Group 117 exhibit flakes removed from the surfaces. Only a single specimen exhibits bifacial-bilateral flaking which appears to have been part of a tool-shaping process. The remainder of the specimens were flaked but are irregular, and the reason for the alteration is uncertain. The chipped and ground specimen in Group 120 exhibits flakes removed from the faces and light grinding toward the edges. It also exhibits heavy edge damage and appears to have been a small

celt or adze-like tool. Hematite flakes in Group 119 have been removed as part of a tool-shaping process, to attempt to shape irregular specimens, or simply for cortex removal. The specimens in Group 121 are hematite flakes with ground faces. Specimens have been removed from completed tools. Specimens were removed either through wear or in an attempt to resharpen the tools. The remainder of the hematite specimens were either unintentionally altered or were not modified.

The ceramics in Group 128 are not particularly informative. All specimens are highly eroded. The paste and temper, however, are similar to those recovered from a number of sites in the area. They are similar to Weaver wares, although the eroded nature of these specimens makes that highly tenuous. A common trait in most of the ceramics in the area is the presence of sand tempering. Based on their relative stratigraphic position in the site, it is not unreasonable to assume they are indeed Weaver ware. The burned clay in Group 133 represents clay which was fired intentionally or unintentionally. They differ from pottery only in that they lack temper. Some of the specimens appear to represent daub.

Fire-cracked rock is by far the largest category of culturally altered material. The amount of this material is relatively high for sites in the area. The fire-cracked rock compares favorably with the rock samples recovered from the river at the northern edge of the site. Except for an obvious selection of stone types for tools, there was little or no cultural selectivity of stone for use as heat-retaining material.

Feature 3 is the northern edge of the feature originally exposed during test excavations on the site (Grantham 1979). The feature lacks any observable pit outline. The feature is a common type in the area and appears to represent a shallow earth oven which was opened after the cooking process was completed. Subsequent natural processes then altered the feature and removed much of the original perishable feature traits. Similar features in all states from unopened features (Feature 1 at 23MC58 - Grantham 1979) to highly dispersed, slightly concentrated rock features (Feature 2 at 23MC74 - Grantham 1979) are present and represent a continuum of similar features.

In summary, the major component on the site is to be Middle Woodland. A thin Late Woodland component is present near the surface. Although Archaic points have been recovered from the site, all were in surface or disturbed contexts. There does not appear to be an Archaic component

in the area of the excavations, as no Archaic material was discovered stratigraphically below Woodland deposits on the site. This does not preclude the possibility that an Archaic component is outside the area excavated, but at present we have insufficient information to support the presence of an Archaic component. The Middle Woodland component on the site is characterized by a preponderance of plant processing tools. The ratio of plant processing tools to hunting tools is very high (ca. 4:1) but is not one of the highest in the reservoir area. The ratio in this season's excavations is higher than that recorded in the previous excavations on the site (Grantham 1979). Cooking activities are represented by the fire-cracked rock features recorded in this and previous excavations. The site appears to have been a large seasonal site occupied at least during the late summer and early fall based on the preponderance of tools associated with plant processing.

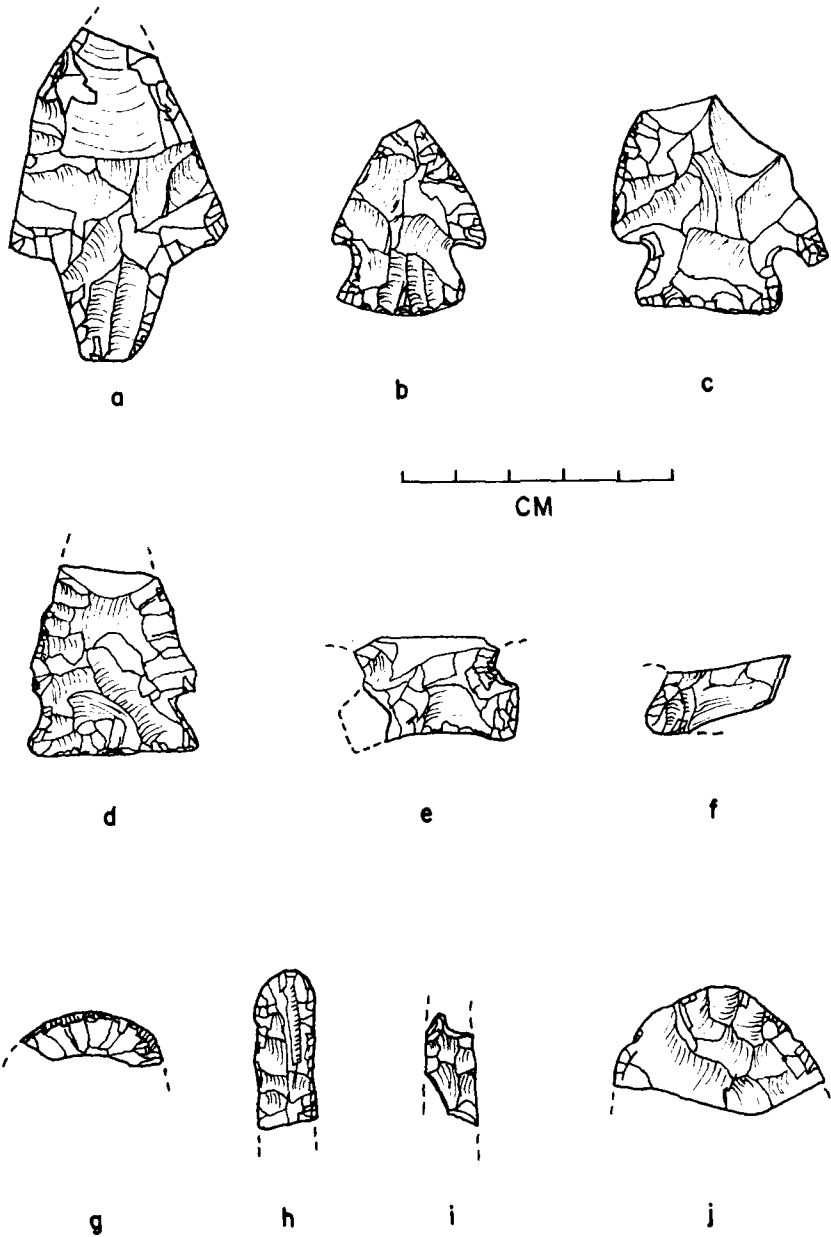


Figure 88. 23MC74. Artifacts. Chert Artifacts. (a) Group 1, (b) Group 26, (c) Group 27, (d) Group 25, (e) Group 12, (f) Group 45, (g) Group 51, (h-i) Group 54, (j) Group 72.

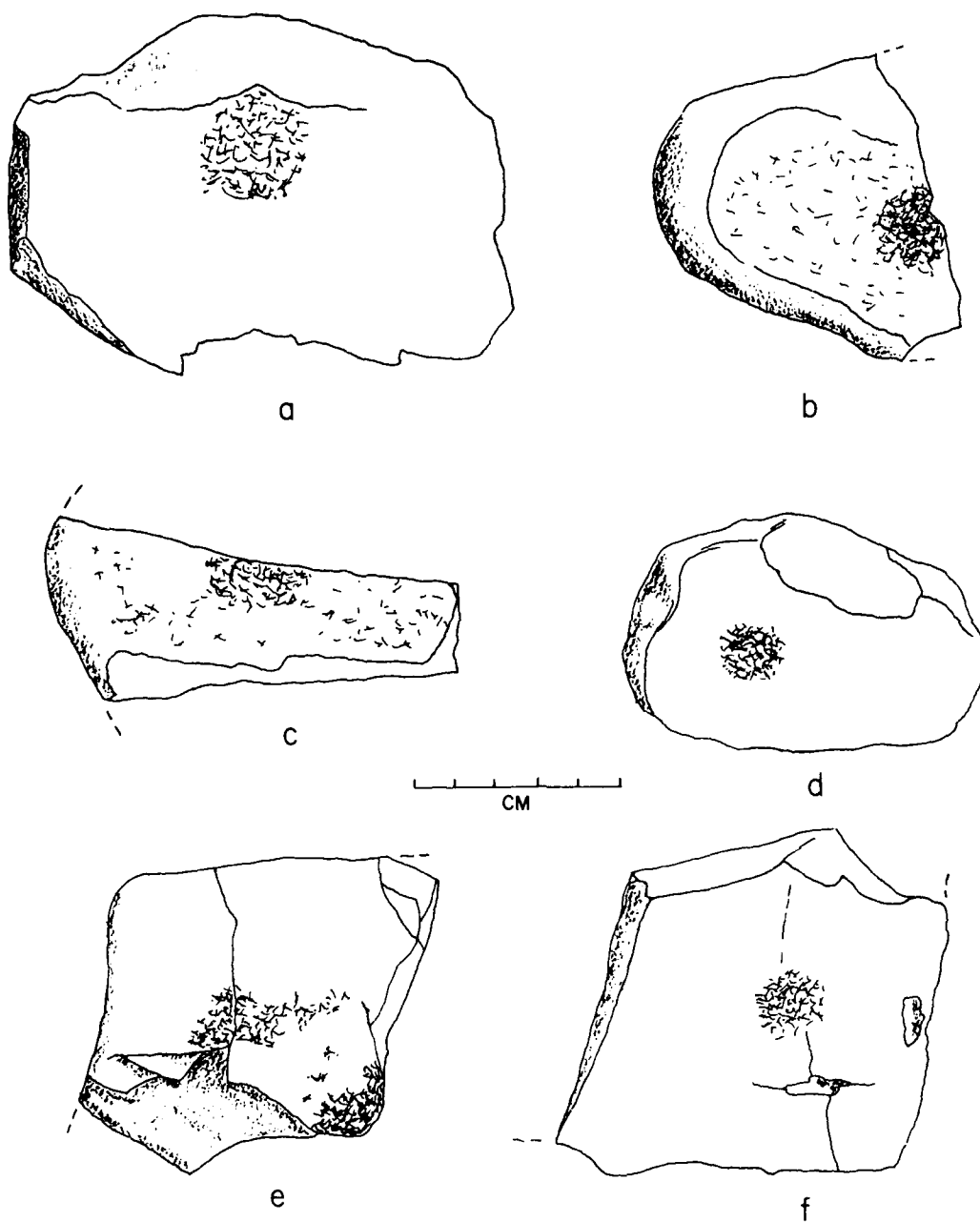


Figure 89. 23MC74. Artifacts. Pecked Stone. (a-f)
Group 90.

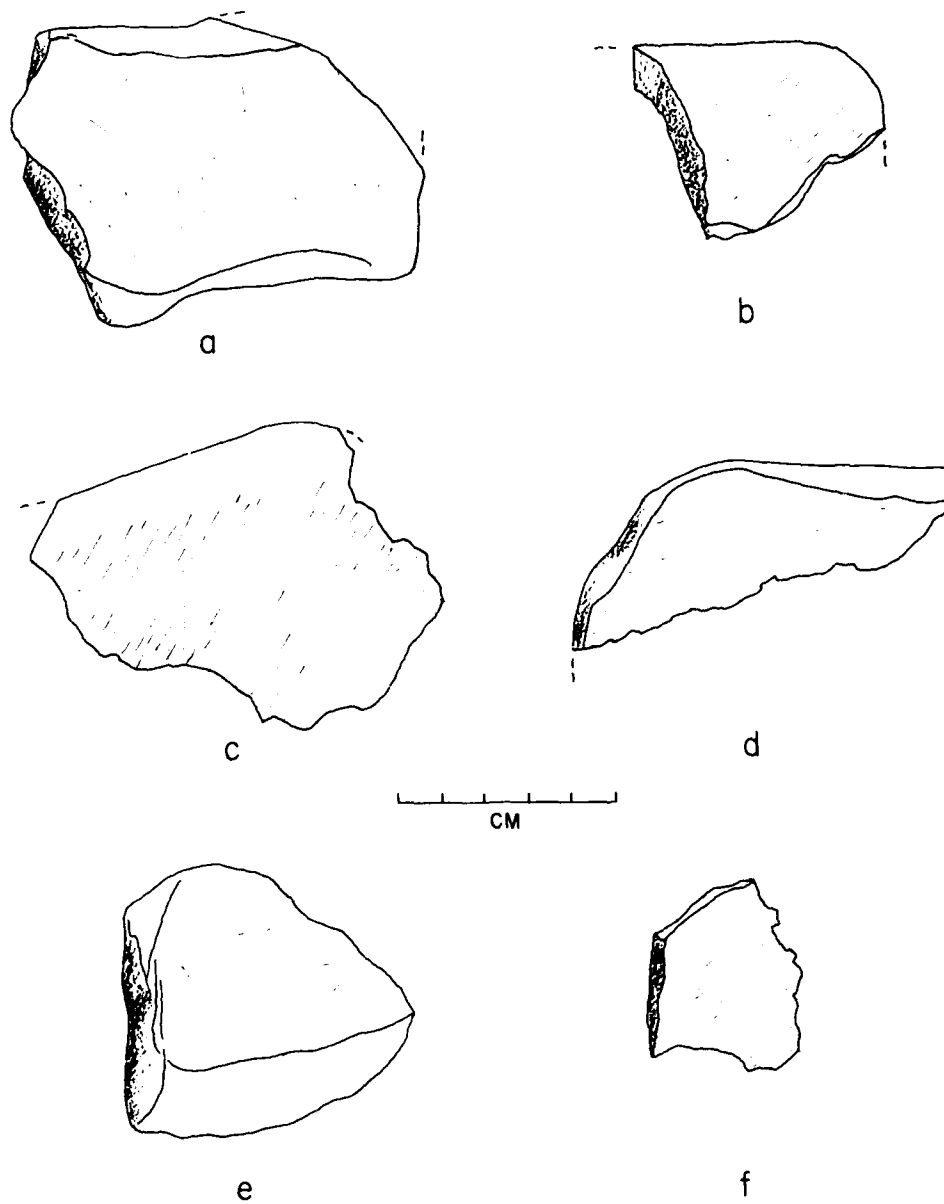


Figure 90. 23MC74. Artifacts. Ground Stone. (a-f)
Group 91.

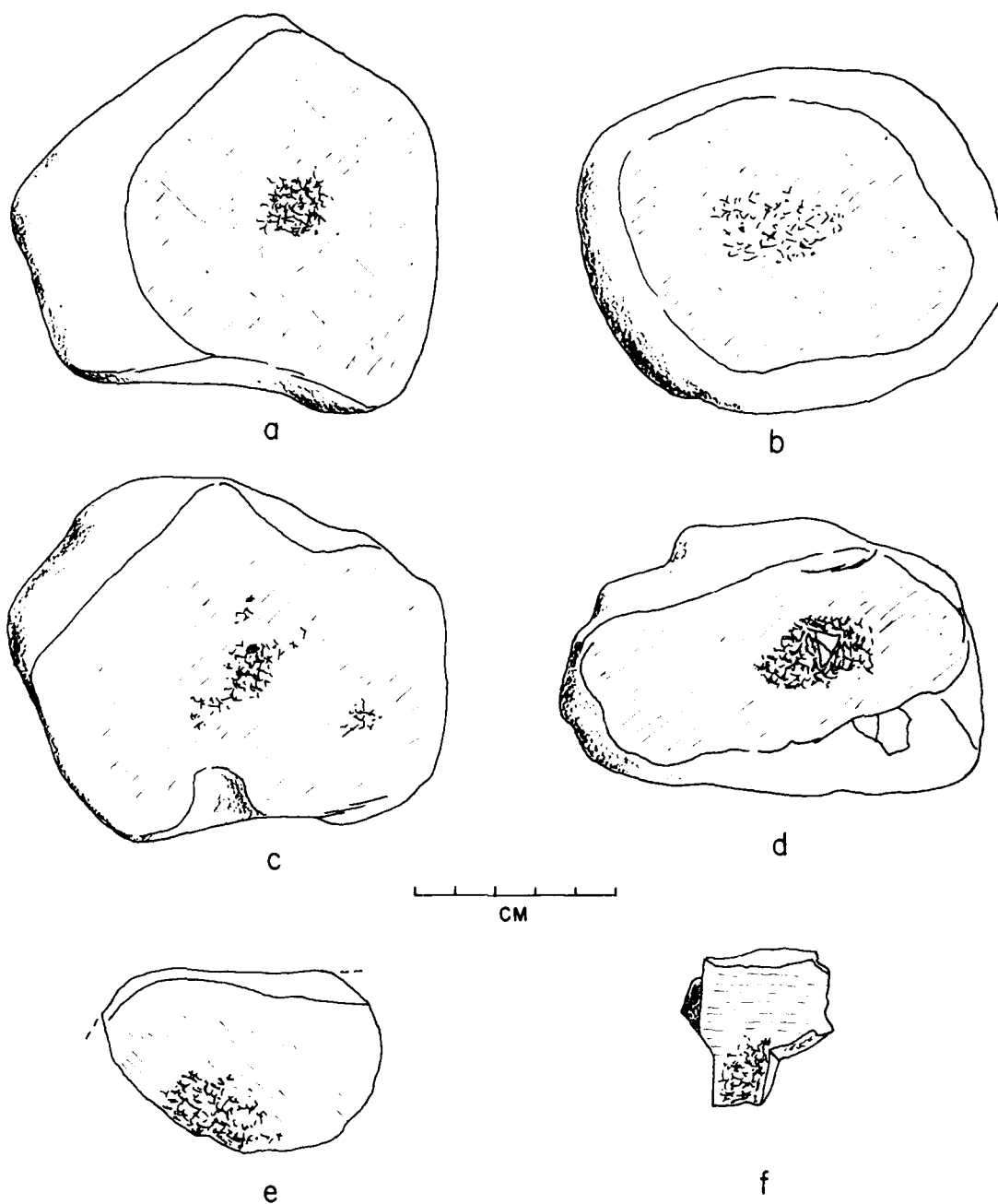
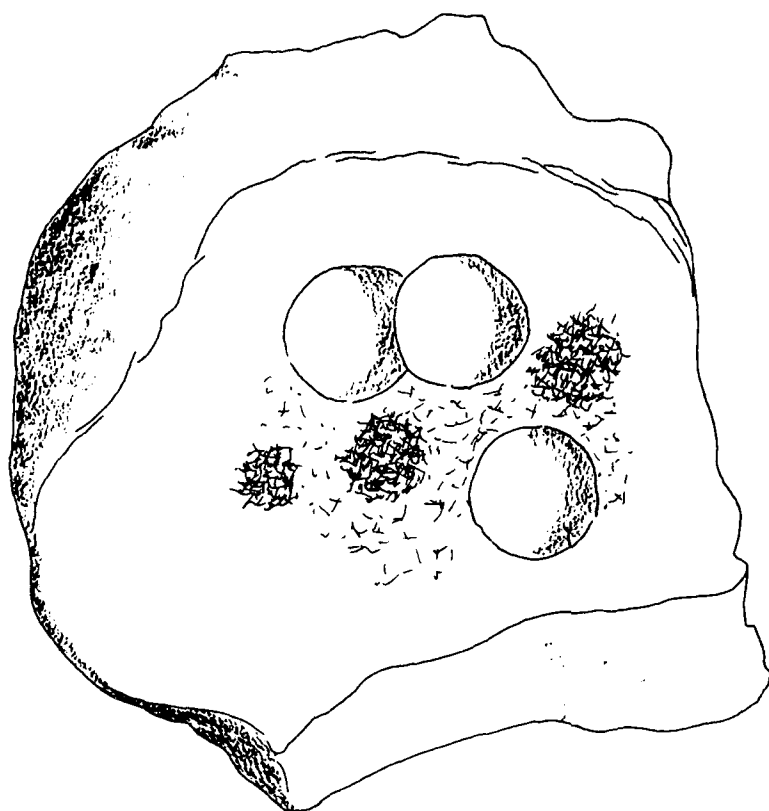
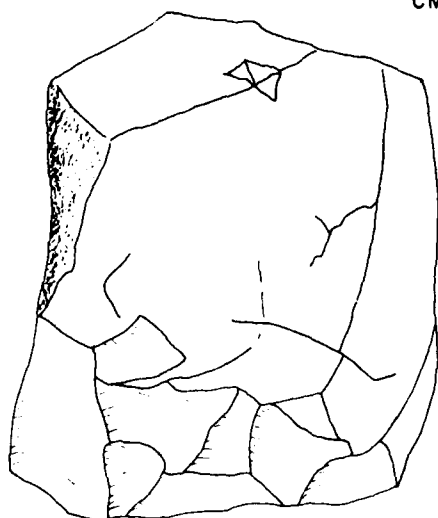
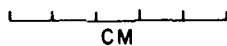


Figure 91. 23MC74. Artifacts. Ground and Pecked Stone.
(a-f) Group 93.



a



b

Figure 92. 23MC74. Artifacts. Pecked/Chipped Stone.
(a) Group 109, (b) Group 104.

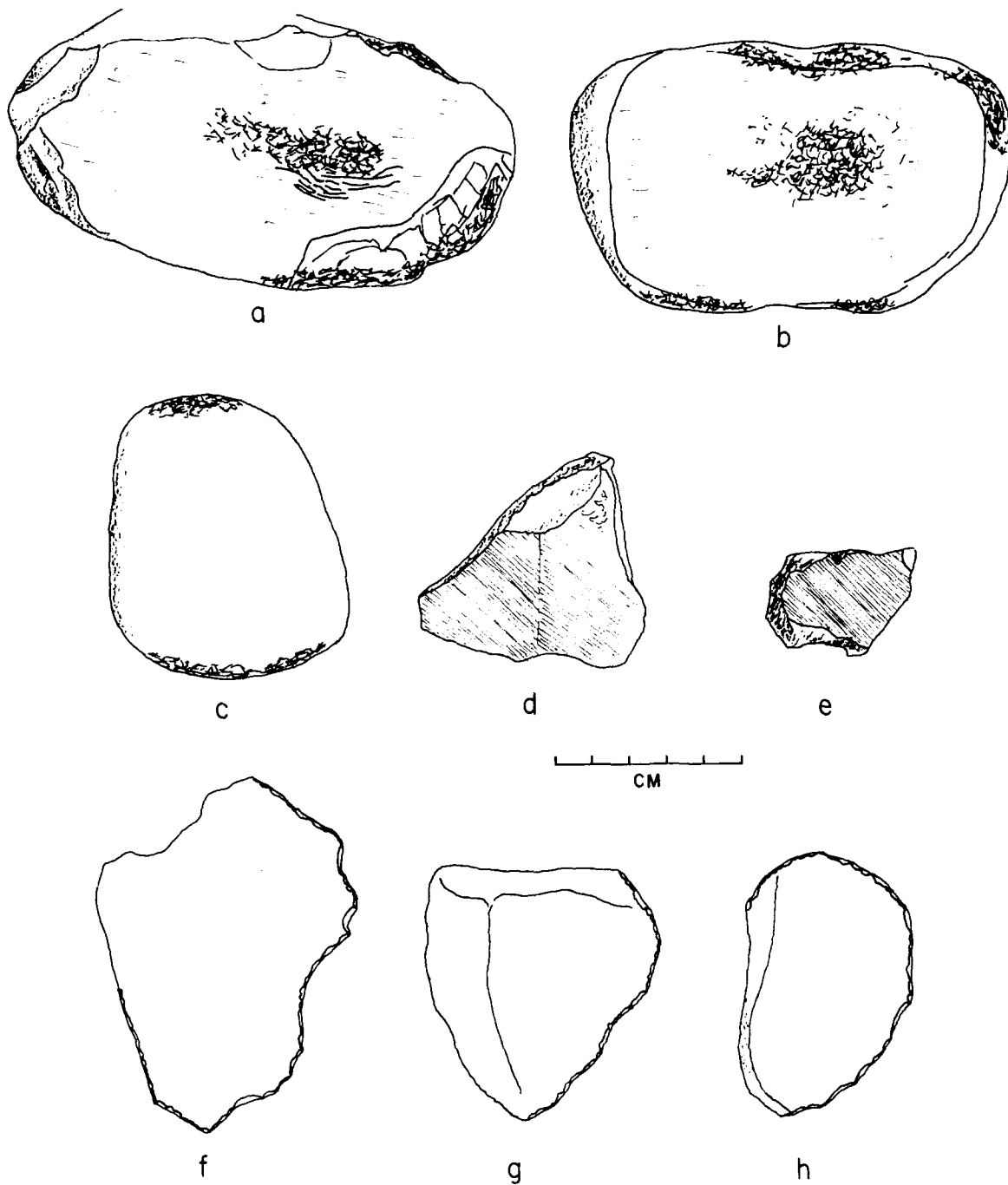


Figure 93. 23MC74. Artifacts. (a-b) Group 96, (c) Group 92, (d-e) Group 101, (f-h) Group 110.

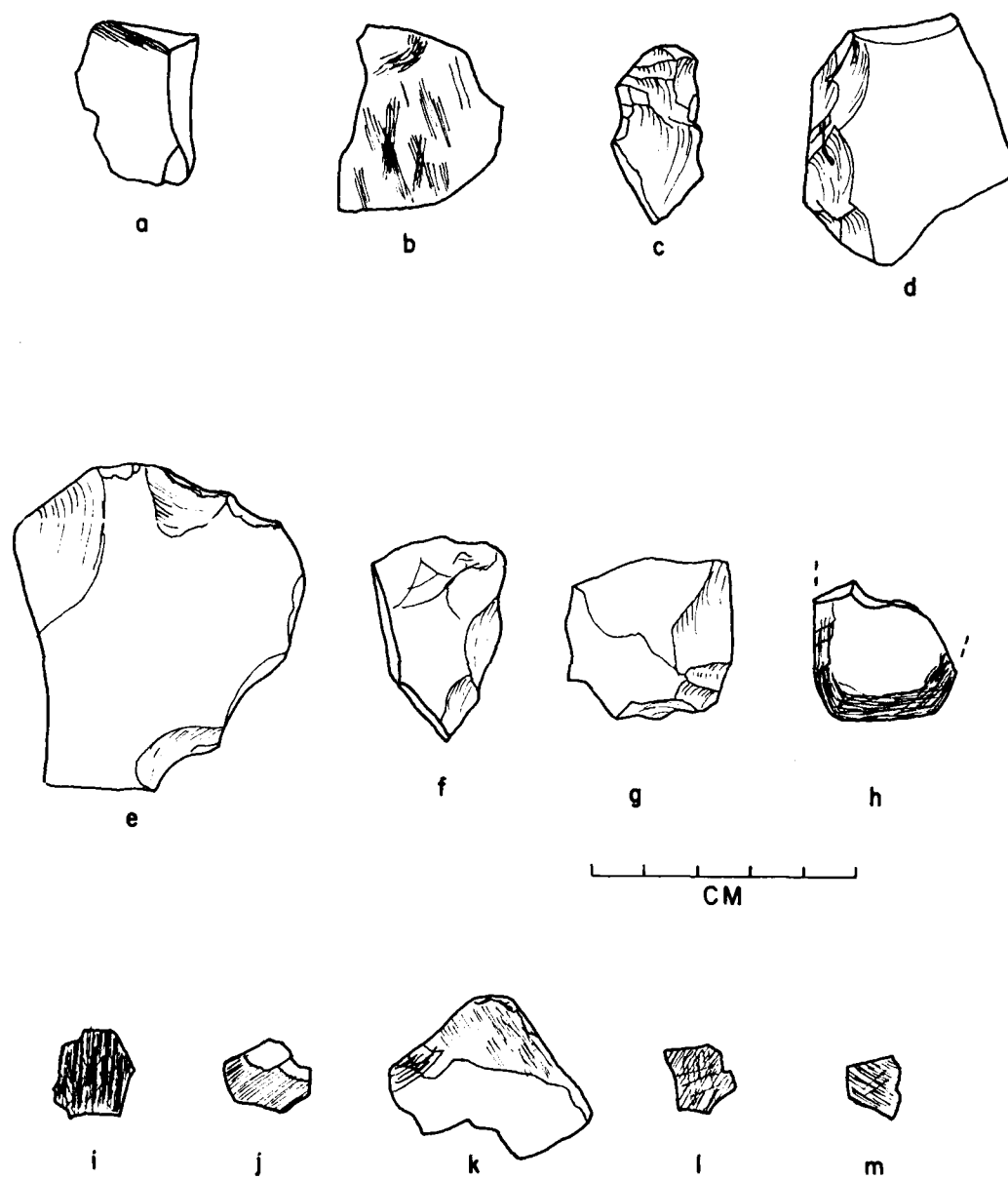


Figure 94. 23MC74. Artifacts. Hematite. (a) Group 118, (b) Group 123, (c-d,f-g) Group 117, (e) Group 122, (h) Group 120, (i-m) Group 121.

This site is located on the left (east) bank of the East Fork. The site lies on the western edge of the hill which projects slightly further west than the hills to the north and south. The river originally flowed 250 feet west of the site. The size of the site was estimated to be approximately 250 feet east-west by 200 feet north-south. The elevation of the site is 780-810 feet m.s.l. Vegetation consisted mainly of dense grass with some secondary growth. Visibility was generally poor. Although the area had been cleared, there had been trees only along the steep northern edge of the site. Some disturbance by heavy equipment was present, but most of the trees had been removed by chainsaw. Material was recovered from an eroded area along the northwestern corner of the site and from an equipment traversed area along the western edge of the site. Material density could not adequately be determined but appeared to be fairly low. It could not be determined surficially if the area had been plowed, but it is believed to have been in the past. Material was in an unknown state of preservation.

MATERIAL COLLECTED

PREHISTORIC

CHIPPED LITHIC ARTIFACTS

Miscellaneous Worked Chert 1

LITHIC WASTE

Chert Flakes 11

Chert Shatter. 1

Fire-cracked Rock. 5

None of the material recovered is diagnostic of any chronological period, site function, or of seasonality. Previous test excavations on the site (Grantham 1979: 203-207) indicated that there may have been a Middle Woodland component on the site based on the recovered projectile point. The ceramics on the site tended to reinforce a Woodland chronological placement. Although no plant processing tools were recovered in the test, the sample size was small. Little can be said of the rest of the recovered materials.

This site lies on top of the ridge which separates the East Fork and the Long Branch. The site lies on a portion of the ridge which is somewhat higher and broader than the surrounding portions of the ridge. Both the East Fork and the Long Branch are a considerable distance away (1000 feet to the East Fork and 1200 feet to the Long Branch). The size of the site is estimated to be 625 feet north-south by 500 feet east-west. The elevation of the site is 860-874 feet m.s.l. Vegetation consisted of oak-hickory forest, and visibility was very poor in these areas. There is a road running through the center of the site, and although excavated well below the level of the site, surface material was still appearing in the road. Visibility in the road was good, and the only surface material was recovered from there. Material density was high. The site appeared to be in an excellent state of preservation.

This site was not to be greatly impacted by construction or clearing activities. User erosion of the area may be high after development of the area begins. The site is one of the few ridgetop sites in the area, and we wished to assess the relative significance of the site area in order to avoid assessment at a future date. Likewise, testing would provide much needed information on cultural inventory, temporal placement, and hopefully, subsistence base in order to fill gaps in our settlement-subsistence systems model. Prior testing (Grantham 1979) indicated that a Late Woodland component was present on the site. We did not, however, have a substantial data base on the length of occupation of the site, as this was based only on two, one and one-half meter squares in one area of the site. Additional tests were to be placed to the west of the previous excavations (Figure 95).

Three, one and one-half meter squares were laid out for excavations. The squares were laid out on both sides of the two-track which bisects the site. Squares were excavated in arbitrary ten centimeter levels to a depth which was culturally sterile. Previous excavations on the site had indicated that the area had never been plowed and that near-surface deposits were essentially undisturbed. A total of four, ten centimeter levels were excavated in the squares.

The only physical stratigraphy noted was the result of soil horizonation. An A1-horizon extended to an average depth of 8 centimeters below the surface. A B-1 horizon extended from that depth to an average depth of 38

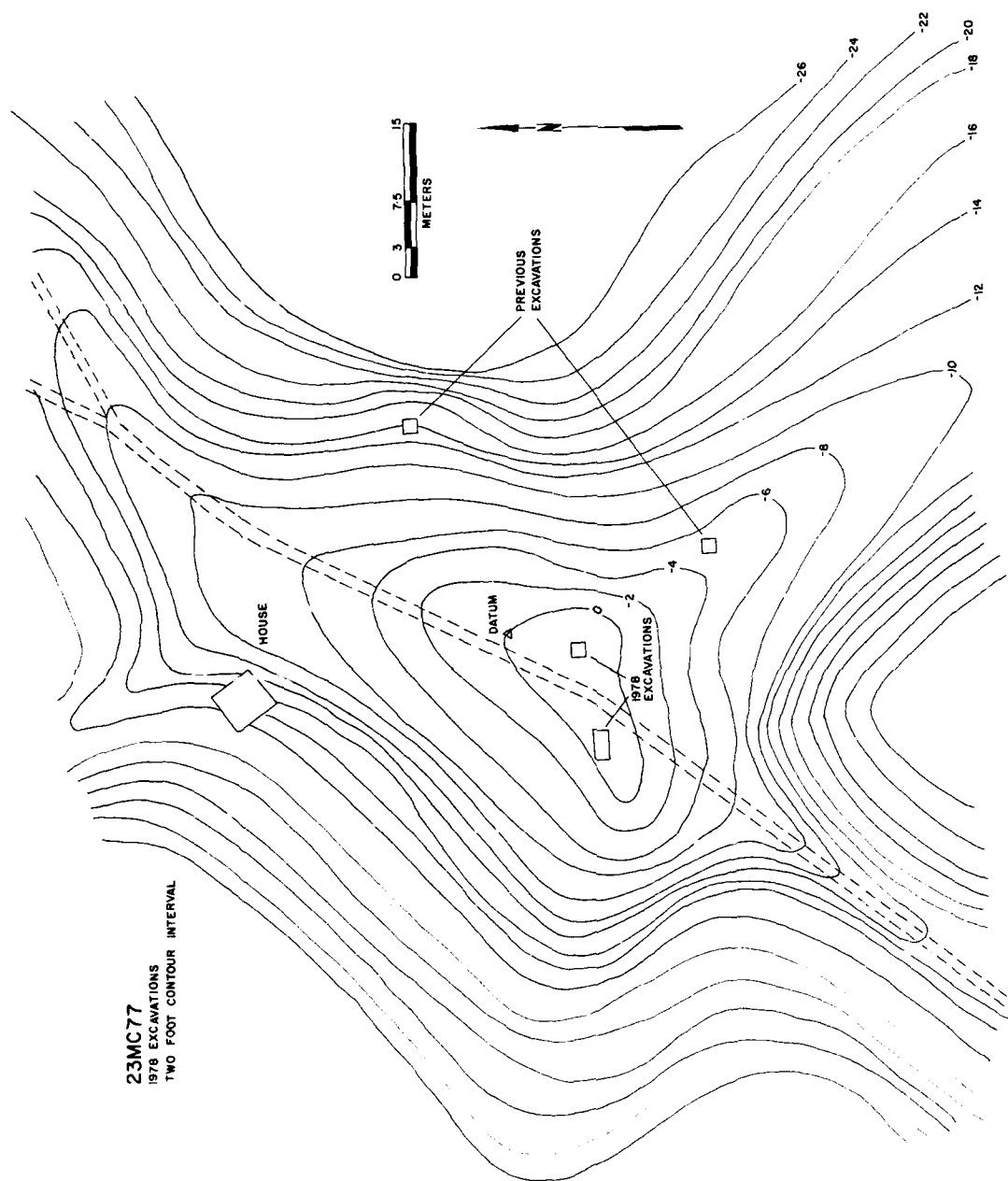


Figure 95. 23MC77. Site map and location of excavations.

centimeters below the surface. A B-2 horizon extended for an undetermined depth below that point.

Features

Feature 1

This feature was a large, roughly basin-shaped pit in the eastern portion of excavation unit 105 and the western portion of excavation unit 108. The outlines of the feature were relatively sharp. There was an area of fire-cracked rock in the feature and an area of burned earth and charcoal. The outline of the burned earth and charcoal was roughly circular in the western portion of excavation unit 108. The fire-cracked rock component of the feature did not correspond with the area of burned earth and charcoal. The area of burned earth and charcoal was 67.3 centimeters in greatest length and 58.4 centimeters in width. The greatest depth of the feature was 10 centimeters. Unlike most features containing large quantities of fire-cracked rock, the distribution of fire-cracked rock does not correspond with the area of burned earth and charcoal. The area of fire-cracked rock lies almost totally to the north of the area of burned earth and charcoal. The area of fire-cracked rock is 90 centimeters in greatest length and 75.8 centimeters in greatest width. The greatest basal depths of the fire-cracked rock was 30 centimeters. Although it might initially appear that the fire-cracked rock was removed from the feature after the end of use of the feature, the greater depth of the fire-cracked rock compared to the burned earth and charcoal would tend to argue against it. It appears rather that the feature was originally larger and more complex. The more complete nature of the fire-cracked rock away from the area of burned earth would indicate that the feature was considerably larger and that burning was more complete along the southern part of the feature. This would result in the better preservation of burned earth and charcoal along the southern edge. The feature was readily discerned by the area of charcoal and burned earth and the concentration of fire-cracked rock. The feature contained only the above material.

Feature 2

Feature two was a small, circular, roughly basin-shaped pit in the northeastern portion of excavation unit 108. The feature is considerably smaller than Feature 1. The feature consisted of a shallow, basin-shaped pit with a small amount of fire-cracked rock. The longest axis of the feature with burned earth and charcoal was 33 centimeters

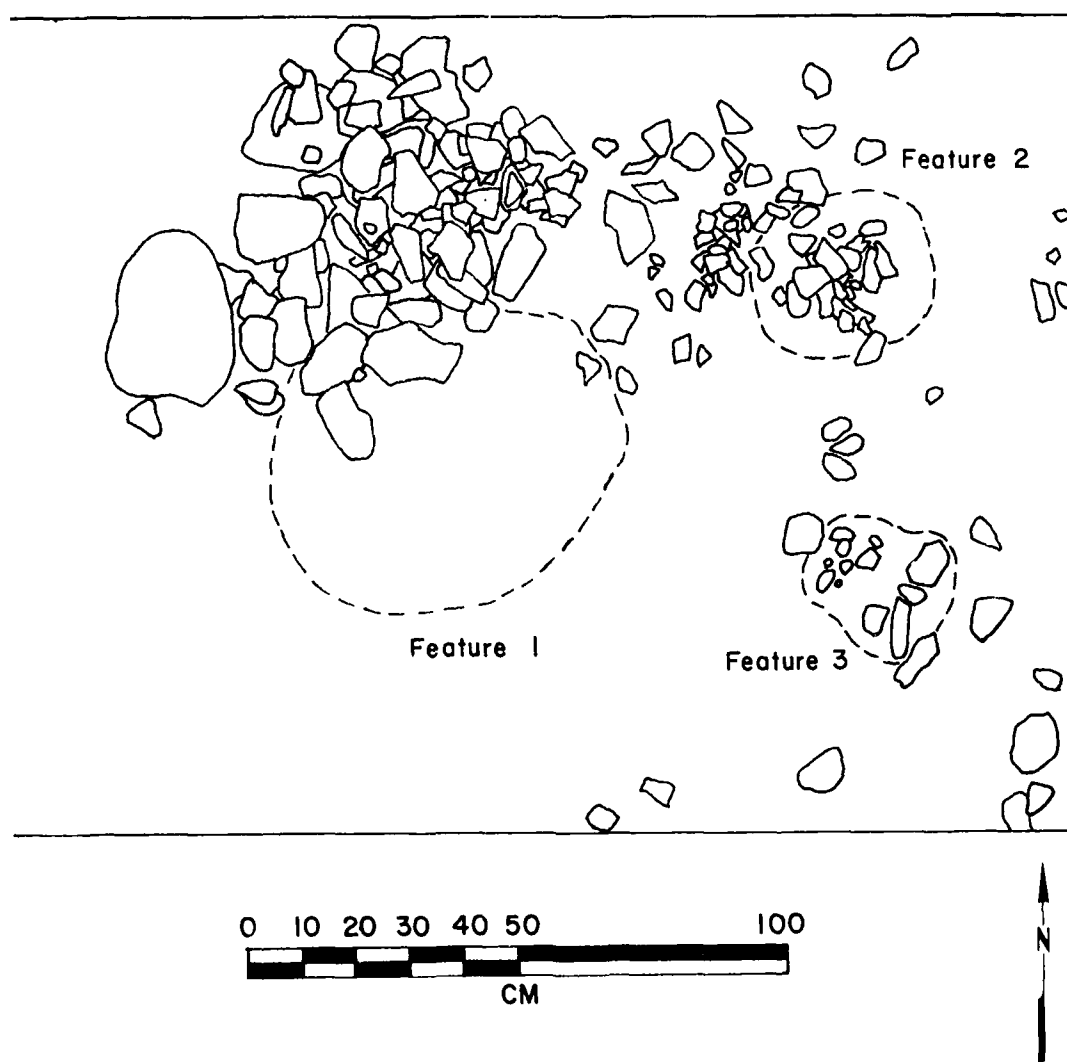


Figure 96. 23MC77. Features 1, 2, and 3.

northeast-southwest, and the greatest width was 30.5 centimeters. Fire-cracked rock associated with the feature extends to the north and west. The extent was undetermined as scattered material overlaps with the fire-cracked rock from Feature 1. The feature was 8.6 centimeters in depth. Again, the feature was distinguished by greater amounts of charcoal and burned earth, as well as a concentration of fire-cracked rock. Associated material consisted of fire-cracked rock and charcoal only. Wood charcoal was unidentifiable.

Feature 3

Feature three was a small, slightly irregular basin-shaped feature in the southeast portion of excavation unit 108. The feature was smaller than Feature 1 and roughly comparable to Feature 2. The feature consisted of a shallow, basin-shaped pit with a very small amount of fire-cracked rock. The longest axis of the burned earth area was 27.9 centimeters northwest-southeast and the greatest width was 25 centimeters. The feature was 5 centimeters in depth. The small amount of fire-cracked rock associated with the feature is largely contained within the pit outlines. Again, the feature was distinguished by great amounts of burned earth and charcoal as well as a slight concentration of fire-cracked rock. Associated materials included fire-cracked rock and charcoal only. Wood charcoal was unidentifiable.

Description of Materials

Points

Group 36:a Small, Expanding-stemmed Point - 1
proximal fragment (Figure 97, a)

The specimen in this category exhibits a straight base, sharp stem-base juncture, expanding stem, abrupt shoulders, and a bi-convex cross-section. The chipping pattern consists of secondary pressure flaking. Flake scars are small, lamellar to slightly expanding, fairly even in size, and inconsistent in distribution. Blank material is difficult to determine but probably consisted of a chert flake based on the relative thickness and the chipping pattern. The specimen exhibits a transverse fracture which was utilized after fracture. There is an oblique stress fracture from the transverse fracture through the stem. There is also a small percussion fracture into the opposite notch. The specimen exhibits heavy basal grinding.

Group 48:a Medial Projectile Point Segment - 1
(Figure 97, b)

The specimen in this category is a large fragment of a projectile point. Although the specimen was apparently corner-notched, it has been subsequently modified to the point where the original morphology can no longer be determined. The specimen exhibits secondary pressure flaking only. Flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. The specimen has been heavily modified. It exhibits a transverse stress fracture. This fracture was subsequently reworked on one face, but was not completed. There is an oblique stress fracture from one lateral margin through the base. The base has been heavily modified by flake removal, which has altered the original base to the point where original morphology can no longer be determined. There is also a small thermal fracture along one lateral margin.

Bifaces and Biface Fragments

Group 74:a Medial Biface Fragment - Thin, Narrow Biface - 1
(Figure 97, c)

The specimen in this category is a medial fragment of a biface with roughly parallel lateral margins. The specimen exhibits transverse stress fractures at the distal and proximal ends. The chipping pattern consists of secondary pressure flaking only. Blank material appears to have been a chert flake based on thickness and the chipping pattern. The nature of the tool is unknown. The lateral margins exhibit little or no wear.

Group 75:a-b Miscellaneous Thin Biface Fragments - 2

The specimens in this category are thin biface fragments too small to be able to determine what kind of tool they represent. They exhibit no external attributes which would aid in their identification or allow their inclusion in any other category. Both specimens exhibit primary percussion and secondary pressure flaking. Specimens exhibit careful edge trimming. Both specimens exhibit two transverse stress fractures.

Cores

Group 77:a-c Polyhedral Cores - 3

This category includes chert nodules from which flakes have been driven in a highly irregular fashion. All three specimens still retain cortex on at least one edge. All three specimens are glacial chert.

Miscellaneous Worked Chert

Group 83:a-b Miscellaneous Worked Chert - 2 (Figure 97, f-g)

The specimens in this category have little in common except for the presence of working on at least one face and one edge. Specimen 83:a is a roughly worked piece of chert shatter, and specimen 83:b is a roughly worked chert flake. The working on both specimens is without discernible pattern. Flaking is largely by heavy percussion. Specimen 83:a is somewhat core-like except that flake removal does not appear to have been for subsequent utilization of flakes. Specimen 83:b is a roughly worked primary decortication flake.

Flake Tools

Group 86:a-b Utilized Flakes - 2 (Figure 97, d-e)

Specimens in this category exhibit minute flake removal along the flake margins through utilization. Both specimens are complete flakes, and both exhibit acute working elements. Specimen 86:a exhibits light unifacial-unilateral wear, and specimen 86:b exhibits light unifacial wear on one lateral margin and light bifacial wear on the alternate lateral margin.

Ground/Pecked Stone

Group 90:a-b Pecked Stone - 2 fragments (Figure 98, a-b)

The specimens included in this category exhibit pecking on at least one face of the stone. Both are fire-cracked in such a way that determination of the number of pecked faces is impossible. Both exhibit central facial pecking but is not of sufficient intensity to have created an actual pit. The degree of force was not heavy as edges of the individual peck marks on specimen 90:b are diffuse. Specimen 90:a lacks individual discernible peck marks. Pecked areas are facially centered and generally small and circular.

Group 94:a Pecked and Battered Stone - 1 (Figure 98, c)

The specimen included in this category exhibits pecking on both faces and battering on both ends and both edges. Pecking is fairly centered on the flat face, and pecking is nearer one end on a ridge on the opposite face. The pecking is not of sufficient intensity to have created a pit. The degree of force appears to have been moderate, as individual peck marks are visible. Battering appears on both ends and

both edges. The battering is similar in nature to the pecking on the faces. Edge wear is characterized by edge crushing.

Group 96:a Ground, Pecked, and Battered Stone -
1 fragment (Figure 98, d)

The specimen in this category exhibits two pecked faces, two ground faces, and battering along the edge after fracture. The specimen had pecking on both faces. Pecking was originally centered on the faces. On both faces, pecking was of sufficient intensity or duration to have completely removed the cortex and reveal the darker interior. Although deep pits have not been created, the pecked areas are readily discernible. Individual peck marks are discernible. Both faces exhibit grinding, although the degree of grinding is slightly greater on one face than the other. There are no readily discernible striations nor is polish readily apparent. One end may exhibit battering prior to fracture, but the most readily apparent battering occurs along the fire-crack after fracture. Batter marks are relatively heavy and are the result of direct contact with dense materials. The degree of force was moderate to heavy. Edge crushing is present, but edge shattering is lacking.

Group 97:a Chert Core Hammerstone - 1 (Figure 98, e)

The specimen in this category appears to have first functioned as a chert core. The specimen had multiple flakes from the lateral margins. The specimen still retains cortex on one face. It exhibits subsequent utilization of the margins in the form of moderate to heavy edge crushing. The specimen exhibits one heavily utilized area and two less intensively utilized areas. Edge wear is characterized by edge crushing with some edge shattering. Edge rounding is absent.

Ceramics

Group 126:a-b Pottery - 2

Ceramics One

Sample: 2 highly eroded body sherds.

Paste:

Temper: Some small sand-sized particles, mainly quartz but with some plagioclase. Particles are generally highly rounded. Particles are small (.1 to 1 mm). Some larger (up to 4 mm) are not highly rounded and appear to be crushed granitic materials.

Texture: Paste is fairly friable. Sherds are too small to readily detect lamination. Sherds break irregularly. Temper constitutes about 20-30 percent of the total paste volume.

Color: Color ranges from reddish yellow (7.5YR6/8) to dark reddish brown (5YR3/2).

Method of Manufacture: Uncertain due to the eroded condition of sherds, but it would appear that vessels were lump modeled. There are no straight breaks indicative of coiling.

Surface Finish: Undetermined.

Decoration: Undetermined.

Form: Undetermined.

Lithic Waste

Group 134: Chert Waste - 294

A total of 226 unmodified chert flakes and 46 pieces of unmodified chert shatter were recovered from the excavations. Surface material included 16 unmodified flakes and eight pieces of unmodified chert shatter.

Group 135: Quartzite Waste - 5

A total of four unmodified quartzite flakes were recovered from the excavations. Surface material included a single piece of unmodified quartzite shatter.

Group 141: Fire-cracked Rock - 967

Fire-cracked rock is the term used for thermally altered stone. A total of 728 pieces of fire-cracked rock was recovered from general levels, 189 pieces were recovered from the Features 1-3 complex, and fifty pieces were recovered from the surface.

Group 142: Unmodified Stone - 474

Materials in this category lack any apparent intentional or unintentional cultural modification. These appear largely to be residual materials which were unintentionally or intentionally transported to the site.

Historic

Group 144:a-ak Miscellaneous Historic Material - 37

A large amount of historic material was recovered from the first level of the excavation units west of the road. Material includes miscellaneous iron, wire, nuts, bolts, screws, staples, nails, washers, glass, ironstone, concrete and cinders. All appear to be associated with the residential site just to the north of the excavation area.

TABLE 44
Artifact Measurements and Attributes - 25MC77

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Points</u>						
<u>Small, Expanding-stemmed Point</u>						
36:a	Sur.	16*	14*	4*	1g*	proximal fragment
<u>Medial Projectile Point Segment</u>						
48:a	103	29*	21*	5	4g*	medial fragment
<u>Bifaces and Biface Fragments</u>						
<u>Medial Biface Fragment - Thin, Narrow Biface</u>						
74:a	Sur.	23*	20	6	4g*	
<u>Cores</u>						
<u>Polyhedral Cores</u>						
77:a	Sur.	79	65	41	220g	
77:b	Sur.	51	44	29	62g	
77:c	Sur.	42	37	25	28g	
<u>Flake Tools</u>						
<u>Utilized Flakes</u>						
86:a	Sur.	32	20	7	6g	1 edge
86:b	Sur.	24	9	4	1g	2 edges
<u>Miscellaneous Worked Chert</u>						
<u>Miscellaneous Worked Chert</u>						
83:a	Sur.	50	32	14	22g	
83:b	Sur.	41	26	14	15g	
<u>Ground/Pecked Stone</u>						
<u>Pecked Stone</u>						
90:a	153	81*	66*	38*	213g*	Argillite 1p?
90:b	225	85*	58*	30*	151g*	Argillite 1p?
<u>Pecked and Battered Stone</u>						
94:a	Sur.	79	77	46	381g	Argillite 2p, 4b
<u>Ground, Pecked and Battered Stone</u>						
96:a	Sur.	85*	51*	39	294g*	Diorite 2p, 2v, 1b
<u>Chert Hammerstone</u>						
97:a	Sur.	78	64	30	191g	Chert 3b

TABLE 45
DISTRIBUTIONAL SUMMARY - 23MC77

	36	48	74	75	77	83	86	90	94	96	97	126	134	135	141	142	144
Xul02, L.1	-	1	-	-	-	-	-	-	-	-	-	-	24	1	113	39	-
L.2	-	-	-	1	-	-	-	-	-	-	-	-	44	1	151	55	-
Xul05, L.1	-	-	-	-	-	-	-	-	-	-	-	-	23	-	54	87	17
L.2	-	-	-	-	-	-	-	-	-	-	-	-	67	1	67	123	-
Xul08, L.1	-	-	-	-	-	-	-	-	-	-	-	1	28	1	130	84	20
L.2	-	-	-	-	-	-	-	2	-	-	-	1	48	-	213	57	-
Surface	1	-	-	1	2	2	3	-	1	1	1	-	24	1	50	-	-
Features 1-3 Complex	-	-	-	-	-	-	-	-	-	-	-	-	38	-	189	29	-

The Site Assemblage: 23MC77

The specimen in Group 36 is similar to variants within Koster Corner-notched and Klunk Side-notched (Perino 1971a). They occur in surface collections from northern Missouri (Eichenberger 1944: Pl. IV; Henning 1961: Fig. 25, CN-1). Similar material was recovered from the Pigeon Roost Creek site (O'Brien and Warren 1979: 241), from Lick Spring Mound group (O'Brien and Warren 1979: 267), and from a large number of Late Woodland sites in the Cannon reservoir area (Hunt 1976). Perino (1971a: 100) estimated that the type Koster Corner-notched occurred no earlier than A.D. 600 or 650 and lasted to approximately A.D. 900. Klunk Side-notched appears to be slightly earlier, and Perino (1971a) estimated that a rough ordering of micro-points in western Illinois should be Klunk, Koster, and Schild. Dates from the Pigeon Roost Creek site (O'Brien and Warren 1979: 236) of A.D. 1360 $\pm$ 90 and A.D. 1400 $\pm$ 100 indicate that both Klunk and Koster may have lasted considerably longer in northeastern Missouri than Perino's estimate.

The specimen in Group 48 has been sufficiently modified that little can be said of the original morphology. The manufacturing technology would, however, tend to indicate a late Middle Woodland or Late Woodland chronological assignment. Previous test excavations on the site (Grantham 1979) recovered a Scallorn point (Bell 1960: 84) and a specimen somewhat similar to Klunk Side-notched (Perino 1973). All three projectile points recovered indicate that the only identifiable component on the site is a Late Woodland component.

The number of miscellaneous biface fragments (Groups 74 and 75) is typical of most of the sites in the area and indicates a long use-life for tools and heavy reuse of tools until too fragmentary to be useable. Flake tools (Group 86) are not numerous, probably due to the small sample size. Both specimens were utilized as cutting tools. The presence of chert cores and miscellaneous worked chert (Groups 77 and 83) indicates the use of local sources of raw materials. Their number is slightly higher than on most sites in the area, although this may simply be an artifact of sample size. The amount of chert waste and quartzite waste is about average for sites in the area. The use of the latter stone type also indicates the use of local materials. Chert flakes are generally quite small and are characterized by a preponderance of biface thinning, trimming, and retouch flakes. The proportion of local to non-local cherts was not calculated.

As with many of the sites in the area, the most outstanding aspect of the tool assemblage is the relatively large number of ground and pecked stone tools. Seventy-one percent of the total morphologically recognizable tools belong to this class. Specimens in Groups 90, 94, and 96, appear to be tools connected with plant processing. Some of the specimens may have been utilized for other functions as well. Some wear is heavier and more indicative of direct contact with denser materials, but the primary modifications appear to be connected with plant processing. The specimen in Group 96 is a chert core which was subsequently utilized as a hammerstone. The specimen exhibits a relatively high degree of edge crushing with some edge shattering and was utilized in direct contact with dense materials. The specimen may have been part of the chert reduction process.

The ceramics in group 126 are not particularly informative. While ceramics are sand-tempered, many of the ceramics in the area are sand-tempered and is not considered to be a diagnostic trait. As all sherds are highly eroded, there are no decorative elements or surface finish remaining.

Fire-cracked rock is the largest category of altered material. The amount of fire-cracked rock in general levels is not high, and most of the fire-cracked rock recovered comes from the features. The fire-cracked rock may not be compared with samples from the immediate area, as no samples were available from within a relatively short distance of the site. The fire-cracked rock does appear, however, to be quite similar to glacial till samples from the general area. Except for the apparent selection of stone types for tools, there is little or no cultural selectivity of stone for use as heat-retaining material.

The features recovered in the test excavations are extremely complex. Feature 1 appears to be a shallow earth oven, similar in nature to features recovered on a number of sites in the area. Similar features in all states of preservation from unopened features (Feature 1 at 23MC58 - Grantham 1979) to dispersed, slightly concentrated rock features (Feature 2 at 23MC74 - Grantham 1979) are present in the area and a continuum of similar features. The relative state of this feature is intermediate in that continuum. A portion of the feature still retains an observable pit outline with ash and charcoal, while much of the feature no longer retains a pit outline. It would appear that the feature was opened, and that natural processes then altered the feature outlines. Features 2 and 3 are similar in construction details to Feature 1, although the size and the amount of fire-cracked rock is considerably

smaller. It would appear that both Feature 2 and Feature 3 functioned for cooking activities, but the nature of the material being cooked is uncertain. They are extremely similar in construction details to the larger basin-shaped features.

In summary, the site is a single component Late Woodland site. All of the points recovered from the surface and in previous excavations indicate a Late Woodland occupation on the site. The abundance of tools connected with plant processing is a common characteristic of sites in the area. They indicate that the site was occupied during the late summer and fall. The site differs significantly from other fall seasonal sites in the area in that it lies along the ridge dividing the drainages of the East Fork and the Long Branch. The site lies a considerable distance from any permanent water supply. The features indicate that cooking activities on the site were common.

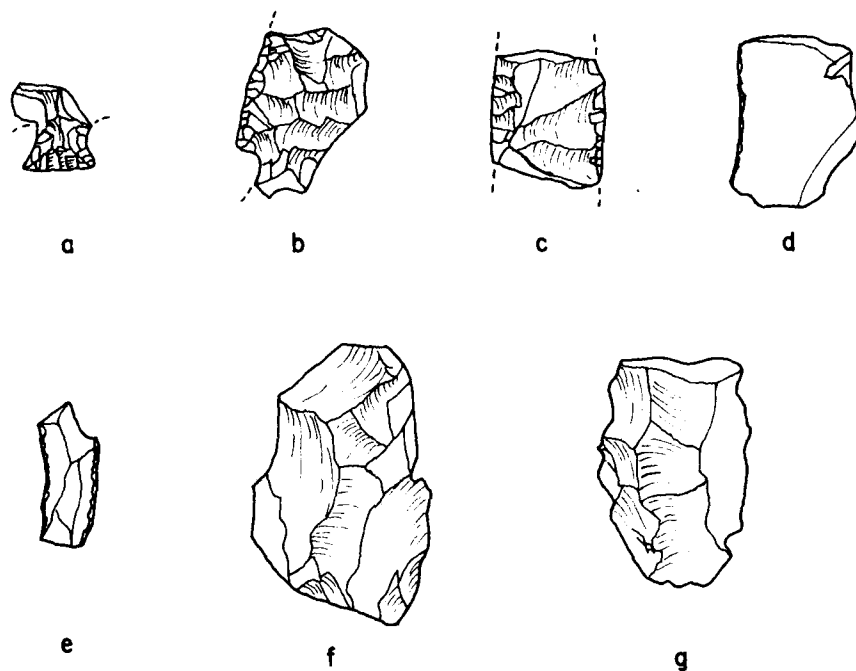


Figure 97. 23MC77. Artifacts. (a) Group 36, (b) Group 48, (c) Group 74, (d-e) Group 86, (f-g) Group 83.

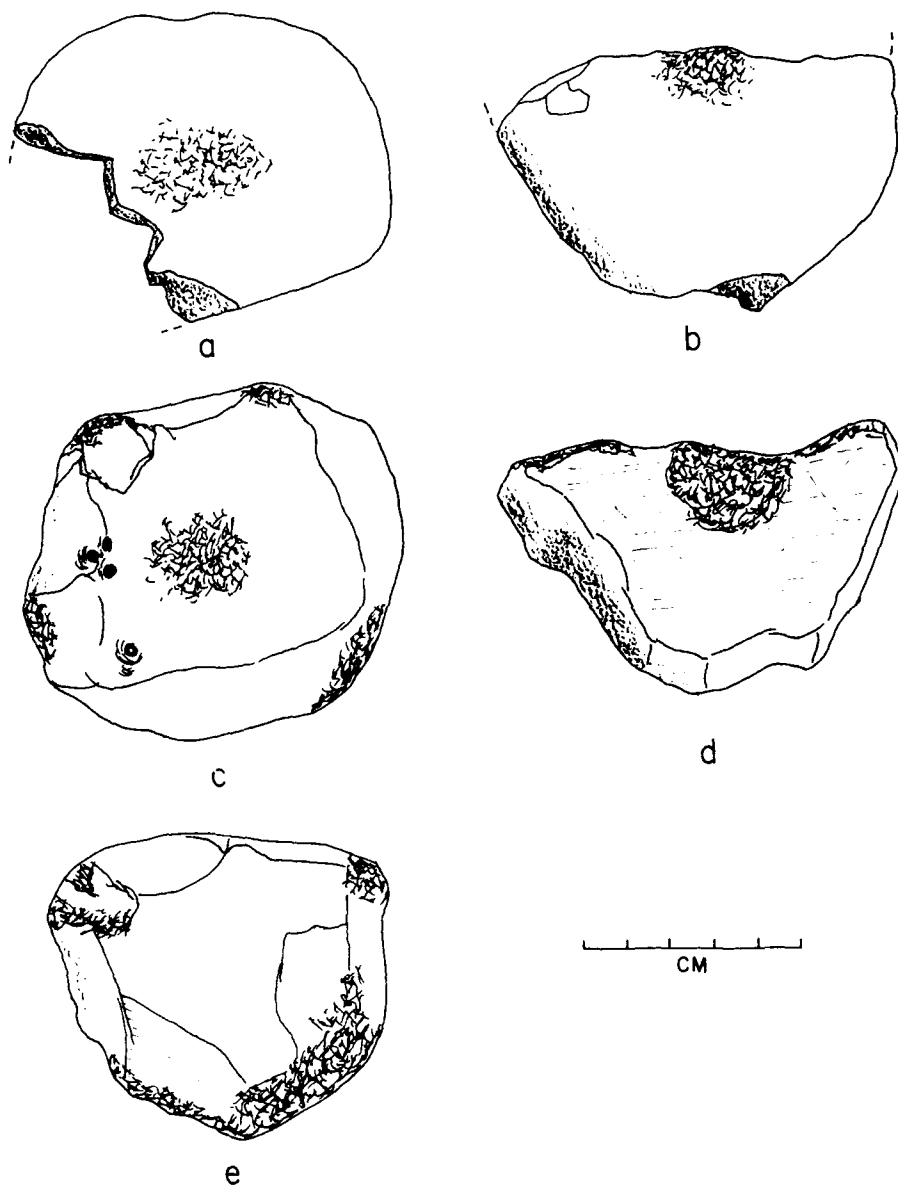


Figure 98. 23MC77. Artifacts. (a-b) Group 90, (c) Group 94, (d) Group 96, (e) Group 97.

This site lies on the right (west) bank of the Long Branch and extends up the ridge dividing the East Fork and the Long Branch. The site is on a fairly high hill bounded by an intermittent stream to the north and by a deep draw to the south. Slope aspect is east. Hill slopes are moderate to the north and east; gentle to moderate to the south. The Long Branch originally flowed along the east edge of the hill. The size of the site was estimated to be approximately 600 feet east-west by 250 feet north-south. The elevation of the site is 810-835 feet m.s.l. Vegetation consisted of forest on the northern one-half of the site and grass pasture on the south half. Visibility was very poor on the northern half but was fair on the southern half of the site. Material was collected from a cattle path which runs the full length of the hill. Material density was moderate. The south half of the site had been plowed, and erosion was moderate to severe in places. The northern portion of the hill appeared to be in a good state of preservation; the southern portion of the hill was in a relatively poor state of preservation.

MATERIAL COLLECTED

PREHISTORIC

LITHIC WASTE

Fire-cracked Rock. 17

None of the material collected is diagnostic of any chronological period, site function, or season. No diagnostic material was recovered from earlier surface collections (Grantham 1979:184-185).

This site lies on the left (east) bank of the East Fork north of the dam axis. The site lies on a small hill truncated by the river along the northern side. The site lies approximately twenty-five feet above the level of the river. There were small washes bounding the eastern and western sides of the site area. The size of the site was estimated to be 120 feet east-west by 100 feet north-south. The elevation of the site was approximately 770-780 feet m.s.l. Vegetation had consisted of oak-hickory forest but had been cleared prior to the survey (Grantham 1977). Visibility was still very good. The entire southern three-quarters of the site had been destroyed prior to the survey (Grantham 1977). Material was collected from a small remnant of the site along the northern edge. Material density was fairly low. This edge had subsequently been largely destroyed by construction on the dam and what little of the area remained intact had been heavily affected by wave action after dam closure. The small amount of material recovered appeared to be essentially all that remained of the site.

MATERIAL COLLECTED

PREHISTORIC

CHIPPED LITHIC ARTIFACTS

Large Side-notched, Straight-based Point - Proximal Fragment (Figure 99, a)	1
Miscellaneous Thin Biface Fragments	2

FLAKE TOOLS

Utilized Flakes	2
---------------------------	---

LITHIC WASTE

Chert Flakes	37
Chert Shatter	5
Quartzite Flake	1
Quartz Flake	1
Fire-cracked Rock	11

The projectile point fragment is a common type recovered from the reservoir area. The specimen is most similar to materials which are part of the Big Sandy Complex. The specimen falls within the type Big Sandy Notched (Chapman 1975: 242). Specimens are common on

Early/Middle Archaic sites (cf. Group 11 - 23MC55 and 23MC56, this volume). While this might tend to indicate an Early/Middle Archaic component on the site, it is dangerous to postulate such a component on the basis of a single specimen. Sites such as 23MC65 and 23MC74 (this volume) contain similar points from the surface but lack any evidence of an Archaic component in the excavated stratigraphy of the site. The remainder of the tools recovered from the site are not particularly informative. Recovery of plant processing tools in previous collections (Grantham 1977) would tend to indicate that plant processing occurred on the site but lacks the dominance of such tools common on fall seasonal sites.

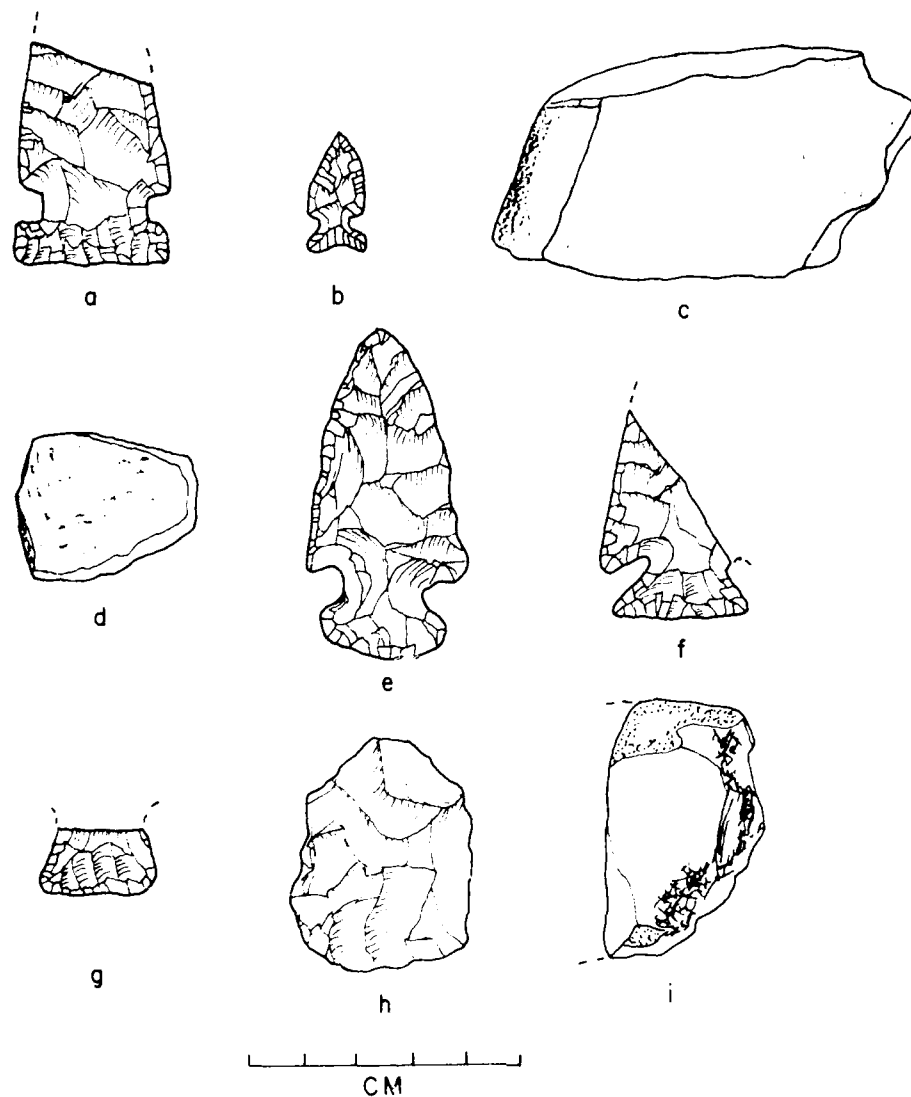


Figure 99. 23MC85. Artifacts. (a) Projectile point. 23MC87 (b) Projectile point. 23MC88. (c) Metate fragment, (d) Ceramics. 23MC89. (e-g) Projectile points, (h) Asymmetrical biface, (i) Chert core hammerstone fragment.

This site lies on the left (east) bank of the East Fork. The hill on which the site lies has an intermittent stream north of the site and a deep draw to the south. The hill is high and steep-sided. The river presently flows along the western edge of the site. The size of the site is estimated to be 170 feet east-west by 170 feet north-south. The elevation of the site is 770-790 feet m.s.l. Vegetation originally consisted of oak-hickory forest along the western edge of the hill. To the east the trees have been cleared, but the area had not been cultivated. The trees on the western edge of the site had subsequently been cleared in conjunction with the construction of the dam. Visibility was generally good. Material density was difficult to estimate but appeared to be fairly low. The southern edge of the site had been destroyed by the construction of the dam. The northern part of the site appeared to be in a fair state of preservation.

MATERIAL COLLECTED

PREHISTORIC

LITHIC WASTE

Chert Flakes 5

The material recovered is not diagnostic of any chronological period, site function, or of seasonality. Previous collections on the site (Grantham 1977) recovered a square-stemmed point and a Scallorn point. It would appear that a Late Woodland component is present on the site based on the presence of the Scallorn point. Square-stemmed points are not particularly diagnostic but occur more commonly on Archaic sites. The recovery of plant processing tools in previous collections (Grantham 1977) would tend to indicate that plant processing occurred on the site but lacks the dominance of such tools common on fall seasonal sites.

This site lies immediately north of 23MC86 across an intermittent stream. The site lies on the left (east) bank of the East Fork. It lies on a low hill which slopes gently towards the river some 100 feet to the west of the site. The size of the site was estimated to be 220 feet east-west by 70 feet north-south. The elevation of the site is approximately 770-780 feet m.s.l. Vegetation had originally consisted of mixed hardwoods, but the site area had been cleared of trees prior to the survey (Grantham 1977) in connection with the construction of the dam. The site area was still bare at the time of recollection, and visibility was good. Material was collected largely from the western edge of the site up to the clearing limits. The western edge of the site had been damaged by the placement of waste materials from the dam construction, which was subsequently removed. The lower part of the site was subsequently damaged by wave action after dam closure. It is doubtful that much of the site remains intact.

MATERIAL COLLECTED

PREHISTORIC

CHIPPED LITHIC ARTIFACTS

Small, Concave-based Corner-notched Point (Figure 99, b) 1

LITHIC WASTE

Chert Flakes 9
Chert Shatter. 2
Fire-cracked Rock. 13

The projectile point is a common variant of Koster Corner-notched (Perino 1971a:100) and is often found in assemblages with Koster Corner-notched. Materials from the Saverton site (Eichenberger 1939:Pl. III, lower, 10; Pl. IV; and Eichenberger 1944: Pl. III) as well as other sites in the area (Eichenberger 1944: Pl. IV, Pl. V, and Pl. X; and Eichenberger 1956: Fig. 4) would indicate a general contemporaneity with the type Koster Corner-notched. Similar specimens from the Late Woodland levels of the Pigeon Roost Creek site (O'Brien and Warren 1979) are more strongly side-notched and classed as Klunk Side-notched (Perino 1973). Dates from these levels were A.D. 1360 $\pm$ 90 and A.D. 1400 $\pm$ 100. This would tend to indicate that they persisted longer than Perino's (1971a:100) estimate of A.D.

500 to 900 for Klunk Side-notched and A.D. 600 or 650 through 900 for Koster Corner-notched. None of the rest of the material recovered from the site and in previous collections is particularly informative.

This site lies on the left (east) bank of the East Fork on the northwest edge of a long slowly-sloping hill. The river lies just west of the site approximately thirty feet. The size of the site is estimated to be approximately 100 feet north-south by 150 feet east-west. The elevation of the site is 760-775 feet m.s.l. Vegetation originally consisted of mixed hardwoods, but at the time of survey, the site had been cleared of trees in conjunction with the construction of the dam. Visibility was good. Material density was not high. Much of the site has been destroyed by the placement of waste removed from the west abutment of the dam. Subsequent placement of this waste for channel fill has caused additional damage to the site.

MATERIAL COLLECTED

PREHISTORIC

CHIPPED LITHIC ARTIFACTS

Thick Biface Fragments 2

FLAKE TOOLS

Utilized Flakes 3

GROUND/PECKED STONE

Metate Fragment (Figure 99, c) 1

CERAMICS

Cordmarked, Sand and Grit-tempered Sherd (Figure 99, d). 1

WASTE

Chert Flakes 8

Chert Shatter. 1

Quartz Flake 1

Fire-cracked Rock. 9

Most of the material recovered in this surface collection is not particularly informative. The cordmarked, sand and grit-tempered sherd is indicative of a Woodland component on the site. The metate fragment indicates that some plant processing occurred on the site, but the number of these tools in all collections from the site is relatively low and is considerably lower than on fall seasonal sites. Previous collections from the site (Grantham 1977) recovered a side-notched, concave-based point which would tend to indicate an Archaic component, and

a small triangular point (Protohistoric?). It would appear that the site area was only occasionally occupied with individual occupations very short in duration.

This site lies in the left (east) bank of the East Fork just across an intermittent stream from 23MC88. The site lies on the western edge of a low hill which slopes slowly to moderately uphill from the site area. Material was somewhat scattered. The size of the site is estimated to be approximately 200 feet north-south by 100 feet east-west. The elevation of the site is 768-785 feet m.s.l. Vegetation originally consisted of mixed hardwoods. The site had been cleared of trees in conjunction with construction of the dam. Weed growth on the site after clearing was considerable, and visibility was fair. Material was collected from the southern edge of the site on the initial survey. Material density was very low. Surface material was also collected from the rest of the lower portion of the hill after the remainder of the site was cleared under the clearing contract. A larger amount of material was recovered near the northwest corner of the hill. Material density was moderate.

MATERIAL COLLECTED

PREHISTORIC

CHIPPED LITHIC ARTIFACTS

Large, Convex-based, Stemmed	
Point (Figure 99, e)	1
Large, Narrow Corner-notched,	
Straight-based Point -	
Proximal Fragment (Figure 99, f)	1
Convex-based, Corner-notched	
Point - Proximal Fragment (Figure 99, g) 1	
Distal Projectile Point Fragment	1
Small, Thick, Asymmetrical	
Biface (Figure 99, h).	1

FLAKE TOOLS

Retouched Flakes	2
Utilized Flakes.	2

GROUND/PECKED STONE

Chert Core Hammerstone	
Fragment (Figure 99, i).	1

LITHIC WASTE

Chert Flakes	43
Chert Shatter.	2

Quartzite Shatter.	1
Fire-cracked Rock.	1

The projectile points fairly consistently. The stemmed point is similar to the type Gibson or Ansell from the Illinois River valley (White 1968: 179). Similar materials appear on Middle Woodland sites in the St. Louis area (Blake 1942), from the Lower Lamine locality along the Missouri River (Shippee 1967: Fig. 4, i-j), and in the Kansas City area (Shippee 1967: Fig. 35, e).

The narrow notched point is closest to the type Norton in the Illinois River valley (White 1968). Norton does not commonly occur in the Kansas City area (Shippee 1967: Bell 1976). Reeder (1978: Pl. 3, j) illustrates somewhat comparable material from the Sohn site in the Kansas City area. The type is rare as well in the Big Bend and lower Lamine River localities along the Missouri River (Kay 1975). The type occurs more commonly in northern Missouri (O'Brien and Warren 1978: 238) in the Salt River valley. Similar points were recovered from the Middle Woodland component at the Pigeon Roost Creek site. The weighted mean of radio-carbon dates was A.D. 232 $\pm$ 90 for the three dates on the level. The type appears to fit well with White's (1968) estimated chronological range of Middle Woodland.

Comparisons with the convex-based specimen are cautiously made due to its highly fragmentary condition. It does, however, resemble somewhat the type Snyders Notched (Scully 1951: 88). Similar material is present from a number of surveys in northern Missouri (Chomko and Griffin 1975: Fig. 3, a; Vehik 1971: Fig. 20; and Eichenberger 1944). They are common in the Big Bend and lower Lamine localities (Kay 1975) along the Missouri River. They also are common in the St. Louis area on Middle Woodland sites (Blake 1942).

All of the projectile points indicate a Middle Woodland component on the site. Utilized and retouched flakes indicate that cutting activities were dominant. The chert core hammerstone fragment exhibits wear characterized by edge crushing and slight edge shattering. It appears to have been utilized in direct contact with dense materials. None of the rest of the recovered materials is particularly informative.

This site lies on the left (east) bank of the East Fork just north of the old City of Macon water intake station. The hill on which the site lies is high and steep-sided along the western and southern edges. The river originally flowed along the western edge of the hill, and there is a large intermittent stream along the southern edge. The size of the site is estimated to be 250 north-south by 150 east-west. The elevation of the site is 790-810 m.s.l. Vegetation consisted of oak-hickory forest, and visibility was generally very poor. Surface material was collected from a cut along the southern edge of the site made during the construction of the Macon water intake station. Material density was high.

MATERIAL COLLECTED

PREHISTORIC

CHIPPED LITHIC ARTIFACTS

Concavo-Convex-based, Corner-notched Silicified Sediments Point (Figure 100, a)	1
Large, Straight-based, Expanding-stemmed Point (Figure 100, b)	1
Unclassified Point Base (Corner-notched) (Figure 100, c)	1
Distal Projectile Point Fragments	3
Medial Projectile Point Fragments	2
Thin Chert Biface Fragments	5
Thick Chert Biface Fragments	2
Thin Quartzite Biface Fragment	1
Miscellaneous Worked Chert	3

FLAKE TOOLS

Retouched Flake	1
Utilized Flakes	6

CORES

Chert Polyhedral Cores	3
Chert Nuclei	2
Chert Core Fragment	1

GROUND/PECKED STONE

Ground Celt with Battered Areas (Figure 100, e)	1
Pecked Stone (Figure 100, f-h)	3
Ground Stone (Figure 100, i)	1

HEMATITE

Ground Hematite (Figure 100, d). 1

LITHIC WASTE

Chert Flakes 316
Chert Shatter. 17
Quartzite Flakes 3
Silicified Sediments Flakes. 3

The corner-notched specimen is not particularly diagnostic. It is similar in several respects to material recovered from Horizon II at the Cherokee Sewer site (Anderson 1974: Fig. 4.7, c). Horizon II yielded radiocarbon dates of 7370 ± 100 B.P. and 7480 ± 100 B.P. The specimen also appears to be somewhat similar to some Middle Woodland material from the Sohn site (Reeder 1978: Pl. 3, h). The specimen is similar to late Middle Woodland/Late Woodland points from the Salt River valley (Henning 1961: 139; Fig. 27, c).

The expanding stemmed point is a common type on Late Archaic sites in the reservoir area (cf. Category 8 - 23MC56, this volume). Comparisons with the miscellaneous point base are probably not well made due to its highly fragmentary condition. It does, however, resemble the corner-notched specimens recovered from 23MC74 (this volume) and convex-based varieties common on Middle Woodland sites (cf. 23MC89, this volume).

The small, corner-notched specimen recovered from the surface previously (Grantham 1977) is a Late Woodland point type. The wide variety of points from the site indicates that the site was only occasionally occupied and that individual occupations were short-lived. The remainder of the chipped stone tools are not particularly informative. The large number of biface fragments and the relatively incomplete nature of the other tools would tend to indicate a relatively long use-life and reuse of tools until too highly fragmentary to be usable.

Flake tools have been utilized largely as cutting tools. Chert cores and fragments indicate the use of local sources of raw materials. The chert waste tends to indicate that little reliance was placed on local chert sources. The chert waste indicates that a majority of the cherts utilized have a non-local origin. Quartzite waste and silicified sediments waste also indicate the use of local sources of raw material.

The ground and pecked stone represent two major functions. The ground stone celt was an argillite cobble ground into shape without first chipping the specimen into shape. Wear is apparent on the bit end in the form of minute flake removal, edge rounding, and striations roughly parallel to the longitudinal axis. The specimen was used in an adze-like motion. The pecked and ground stone appear to have been connected with plant processing. Although plant processing occurred on the site, it is not as dominant as on fall seasonal sites in the area. A single piece of hematite appears to have been ground for pigment.

In summary, the site was occupied intermittently over a long time period. Occupations were short-lived and not intense. Tools indicate that both hunting and plant processing were part of the subsistence base, but plant processing does not dominate.

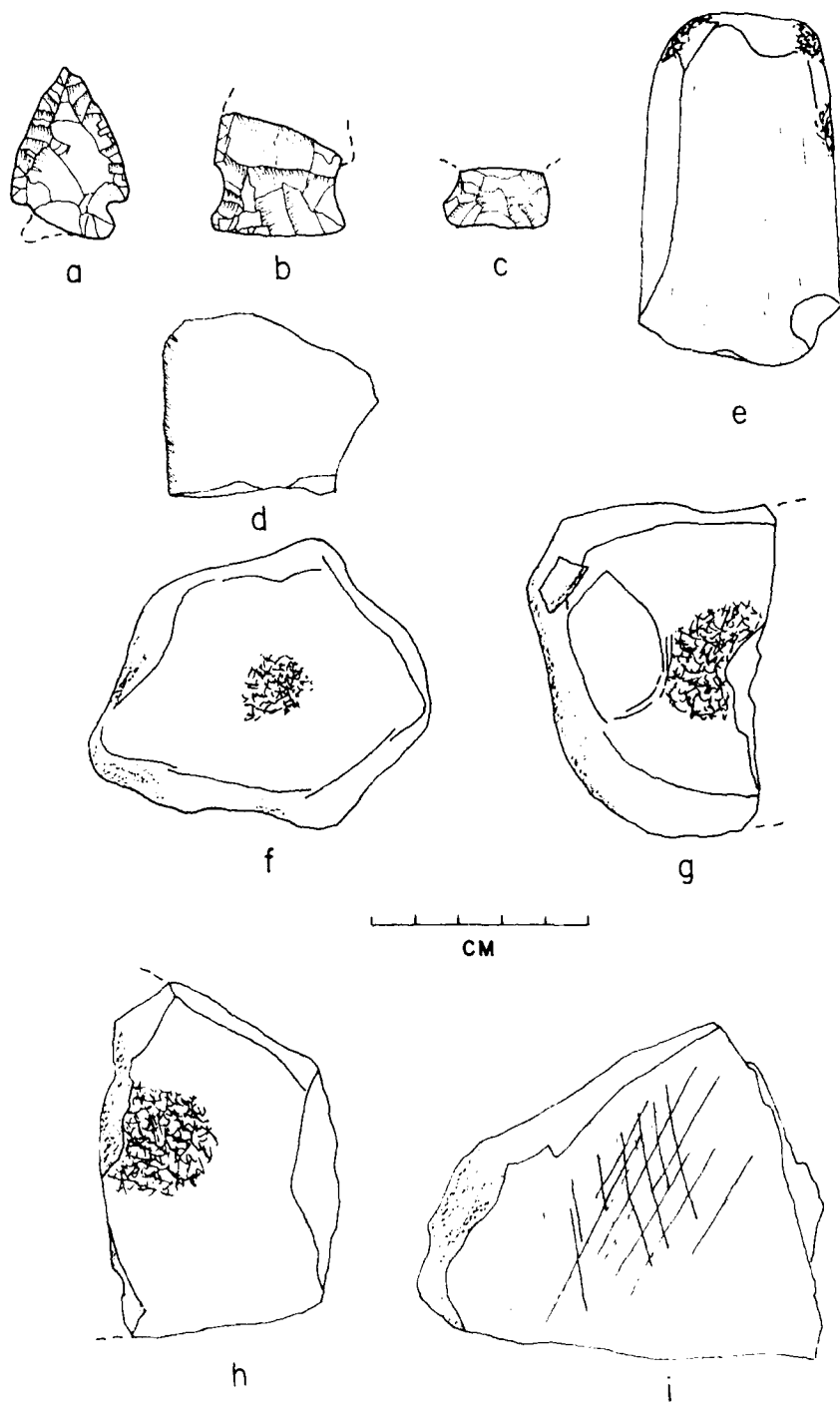


Figure 100. 23MC90. Artifacts. (a-c) Projectile points, (d) Ground hematite, (e) Celt, (f-h) Pecked stone, (i) Ground stone.

This site lies on top of the ridge dividing the East Fork and the Long Branch. The site is located on a narrow portion of the ridge, slightly higher in elevation than the immediate areas to the north and south. The size of the site is estimated to be approximately 300 feet north-south by 250 feet east-west. The elevation of the site is 850-862 feet m.s.l. Vegetation consisted of oak-hickory forest along the eastern edge. The rest of the site was in dense grass and secondary growth. Surface material was recovered from a dirt road which runs along the eastern edge of the site. The road had cut some distance below the surface, largely through erosion. Much of the site appears to be undisturbed. Material density could not be adequately determined at the time of the original survey.

User erosion of the area of the site may be high after development of the area begins. The site is one of the few ridgetop sites in the area, and we wished to obtain a sample of materials for density comparisons. Likewise, testing would provide much needed information to fill gaps in our settlement-subsistence systems model.

Two, one and one-half meter squares were laid out for excavation. The squares were laid out east of the two-track which runs along the eastern edge of the site (Figure 101). As the historic architectural unit was located west of the two-track it was believed that the area east of the road was probably the most intact. Although the area was slightly steeper and would probably contain shallower deposits, the area was expected to have less historic disturbance. Squares were excavated in arbitrary ten centimeter levels to a depth which was culturally sterile. It did not appear that the area had ever been plowed and that near-surface deposits were essentially undisturbed. The eastern excavation unit did not contain any cultural material in the first level, and the excavation unit was abandoned. The western excavation unit was excavated to a total depth of thirty centimeters. A total of three, ten centimeter levels were excavated.

The only physical stratigraphy noted was the result of soil horization. An A1-horizon extended from the surface to an average depth of eight centimeters below the surface. A B1-horizon extended from that point to a depth of twenty centimeters below the surface. A B2-horizon extended for an undetermined depth below that point.

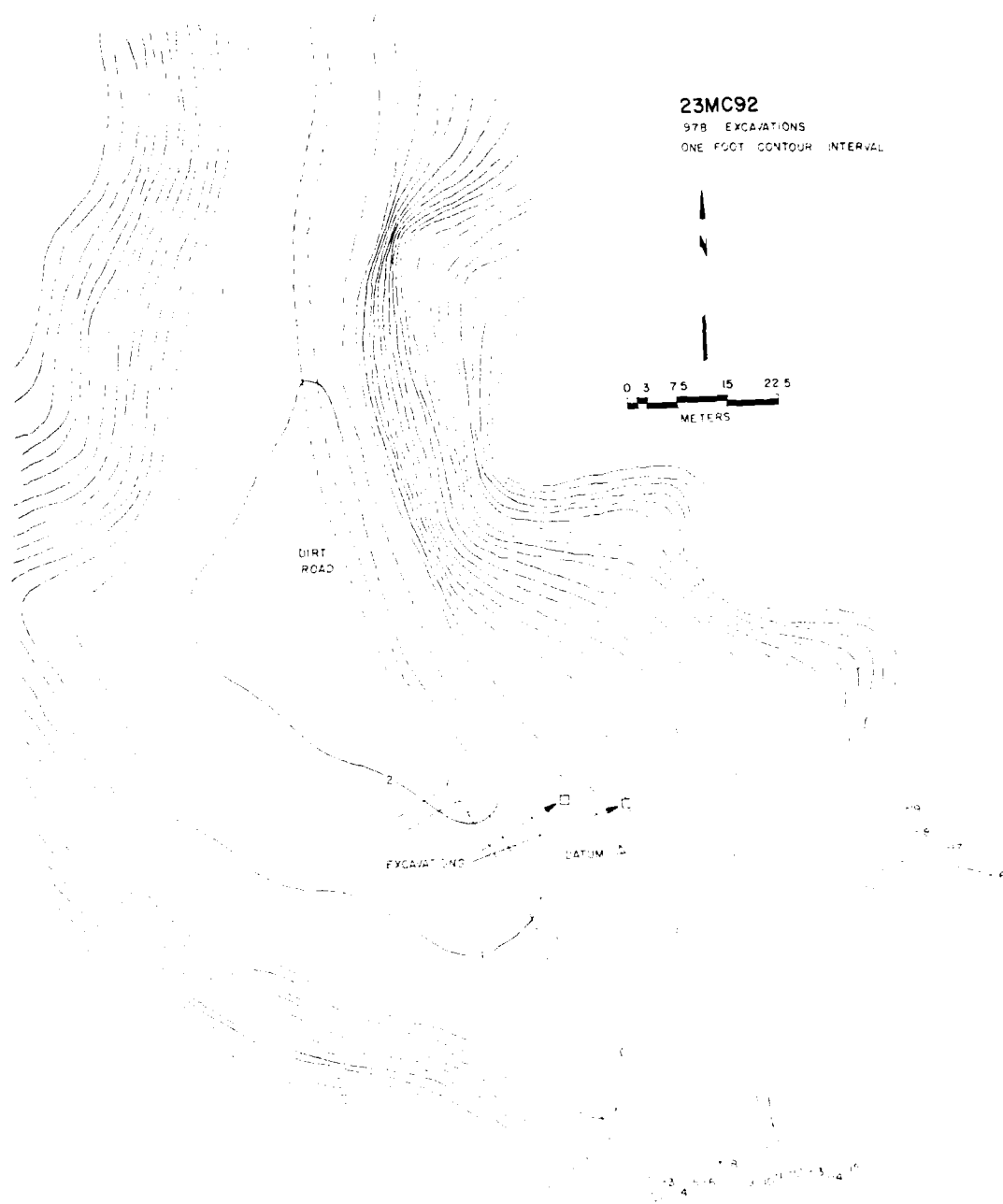


Figure 101. 23MC92. Site map and location of excavations.

Description of Materials

Lithic Waste

Group 134: Chert Waste - 6

A total of two unmodified chert flakes were recovered from the excavations. Surface material included three unmodified chert flakes and one piece of unmodified chert shatter.

Group 141: Fire-cracked Rock-20

Fire-cracked rock is the term used for thermally altered stone. A total of 16 pieces of fire-cracked rock were recovered from the excavation, and four pieces were recovered from the surface.

Group 142: Unmodified Stone -46

The specimens in this category lack any apparent intentional or unintentional cultural modification. These appear largely to be residual materials which were unintentionally transported to the site.

Historic

Group 144:a-d Miscellaneous Historic Material - 4

A small amount of historic material was recovered from the upper level of both excavation units. Materials included two fragments of wire, one piece of glass, and one piece of ironstone. The material is associated with the residential site located to the west of the excavated area but within the boundaries of the site.

Table 46

DISTRIBUTIONAL SUMMARY - 23MC92

	134	141	142	144
Xul02, L. I	1	4	15	1
Xul04, L. I	1	9	11	3
L. II	-	3	10	-
L. III	-	-	10	-
Surface	4	4	-	-

The Site Assemblage: 23MC92

The recovered material does not readily lend itself to the identification of the components present on the site. Earlier surface collections from the site (Grantham 1977) likewise did not yield any temporally diagnostic material. The three recovered distal projectile point fragments from the survey indicate that hunting was an activity.

Two pieces of ground and pecked stone were recovered in the previous collections (Grantham 1977). The piece of ground stone appears to be a part of plant processing activities while the heavily facially pecked stone was connected with direct contact with denser materials. Little can still be said of the relative importance of various subsistence activities.

The test excavations were placed east of the road running through the site as it was anticipated that much of the site west of the road was disturbed by the historic component. Unfortunately, most of the site was west of the road and that our tests were placed at the outer edges of the site. The main body of the site west of the road had been somewhat disturbed by the burial of the historic structure under the clearing contract. How much of the area is disturbed is, however, unknown. It is probable that some of the site still remains intact west of the road.

This site lies on the right (west) bank of the East Fork on the right abutment of the dam. The site lies on a high hill above the lower hill slope. The hill is nearly level and slopes slowly uphill to the west. The hill projects only slightly further into the floodplain than the areas to the north and south. The river originally flowed some distance to the east of the site (ca. 1300 feet). The size of the site is estimated to be 300 feet northwest-southeast by 170 feet northeast-southwest. The elevation of the site is 800-825 feet m.s.l. Vegetation consisted of weed growth, and visibility was fair. Surface material was collected over the entire surface of the site, and material density was moderate. At least half the site has been destroyed by construction of the dam. The remaining portion of the site is disturbed as well.

This site was one of the few sites on the western side of the East Fork. The site also lies at one of the most constricted areas of the river valley. The site had already been heavily impacted by the construction on the right abutment of the dam when the site was recorded during the survey. It was believed that a portion of the site was still intact. Material recovered from the surface did not indicate a dense deposit. Our main objective in testing the site was to determine the relative condition of the site. If the site was still intact and a significant deposit was recovered, additional work was planned. The site would be completely destroyed by the dam, and we wished to make an assessment of the site.

One, one and one-half meter square was laid out for excavation. The square was laid out near the northeast corner of the hill, north of the obviously disturbed area connected with the construction of the dam (Figure 102). It appeared that the area had been disturbed on the surface, but it was hoped that subsurface deposits were still intact. The square was excavated in arbitrary ten centimeter levels, as the amount and extent of disturbance was not known. The square was to be excavated to a depth which was culturally sterile. Cultural material was recovered from the first level only. A second ten centimeter level exhibited alternating layers of compacted silt and clay and was heavily disturbed. The level was devoid of cultural material. A third ten centimeter level was begun, but it exhibited a heavily disturbed nature similar to level two. At approximately 22 centimeters below the surface, a heavily compacted B2t-horizon was encountered. Thus, it would appear that there were no undisturbed deposits on the site.

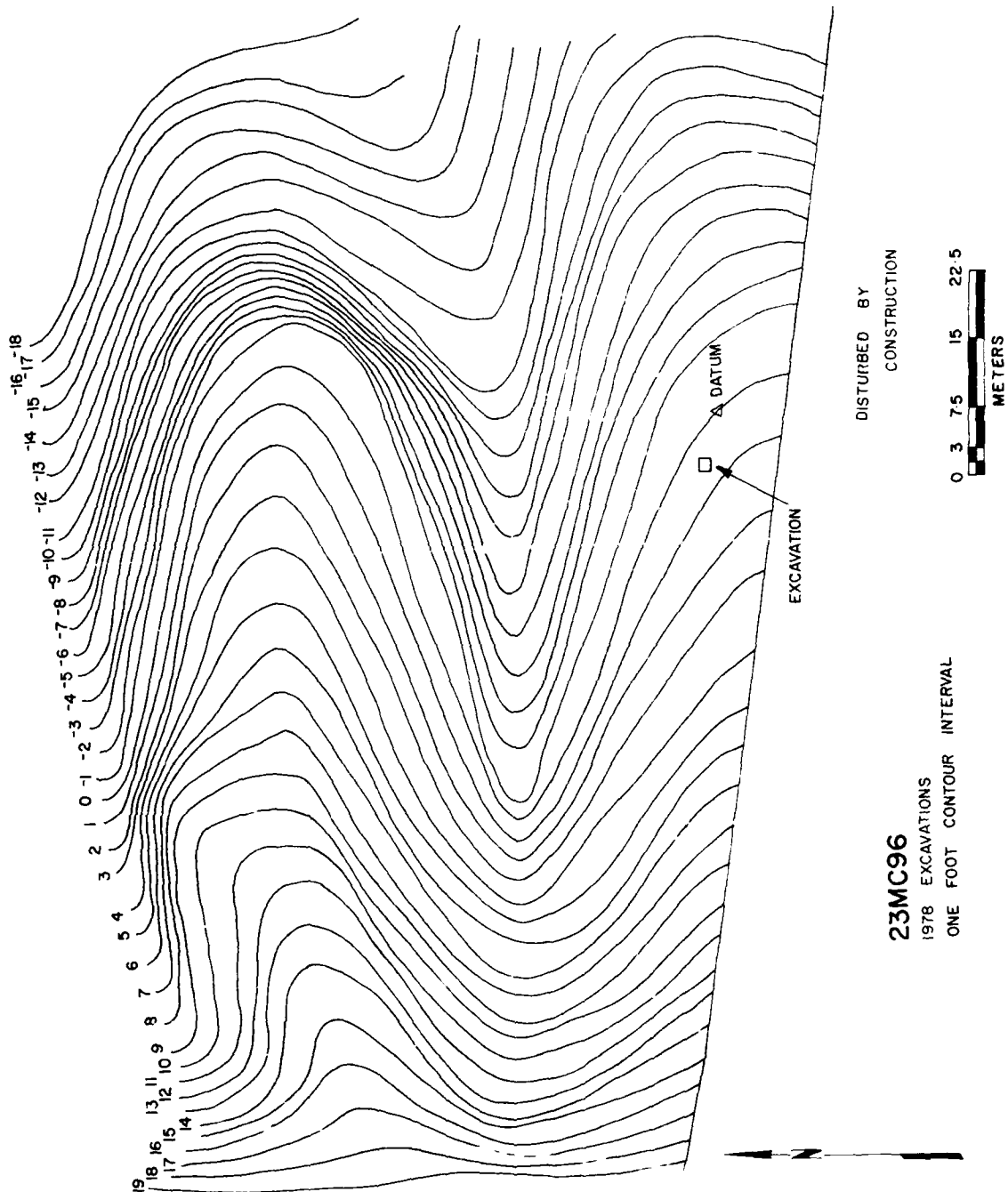


Figure 102. 23MC96. Site map and location of excavations.

It could not adequately be determined whether the material represents deposits from the area or if the material was brought to the area as part of the dam construction.

The stratigraphy was highly complex, but it appeared that the soils were the result of recent disturbances. No attempt to map the alternating layers of silt and clay was made. It appeared that the compacted B2t-horizon represented an original part of the soil profile. The soil had been stripped to that point, but the disturbed soil above that point was uncertain as to origin.

Description of Materials

Lithic Waste

Group 134: a-c Chert Waste - 3

A total of one unmodified chert flake and two pieces of unmodified chert shatter were recovered from the excavations.

Group 141: Fire-cracked Rock - 43

Fire-cracked rock is the term utilized for thermally altered stone.

Group 142: Unmodified Stone - 129

The specimens in this category lack any apparent intentional or unintentional cultural modification.

Historic

Group 144:a Miscellaneous Historic Material - 1

A single piece of rubber was recovered from the upper level of the excavation unit. The agent for introduction is uncertain, but is probably associated with the on-going construction activities on the dam.

TABLE 47

DISTRIBUTIONAL SUMMARY - 23MC96

	134	141	142	144
Xul02, L. I	2	34	99	1
L. II	1	7	18	-
L. III	-	2	12	-

The Site Assemblage: 23MC96

Little can be said of the material recovered from the site. None of the material is diagnostic of any chronological period, site function or of seasonality. Previous surface collections from the site (Grantham 1977) indicated that a Middle Woodland component on the site was possible. This was based on a single Steuben Stemmed-like point.

The stratigraphy in the test square indicated that little or none of the site was intact in that area. The soil down to the undisturbed B2t-horizon was characterized by alternating layers of silt and clay. Heavy compaction bands were also present. It was not readily apparent whether the materials were disturbed by mixing on the site and thus represent only disturbed materials or whether they were transported from another area.

This site lies on the right bank of a large intermittent stream flowing into the East Fork. There is a seep spring to the east of the site area and a large draw to the west. The intermittent stream lies some 330 feet north of the site and flows toward the East Fork some 1300 feet to the east. The size of the site is estimated to be 300 feet north-south by 200 feet east-west. The elevation of the site is 730-805 feet m.s.l. Vegetation consisted of dense grass and weeds, and visibility was generally poor. Most of the surface material was recovered from a large bulldozer cut running north-south through the center of the site. Material density could not be adequately determined but appeared to be moderate. Although erosion had removed some of the topsoil in places, most of the site area appeared to be relatively undisturbed.

We wished only to test this site. Material density when the site was recorded was not high. The site lies in a relatively unique setting in that it lies along a small intermittent stream and near a small seep spring. Although material density was not high, the area of the site was relatively large. The site had been impacted by the construction of the dam, and additional impacts were anticipated. We wished mainly to be able to determine the type of site and its relative condition. As we intended only to test the site, we did not anticipate adding a great deal of information to our data base.

One, one and one-half meter square was laid out for excavation. The square was laid out near the northern edge of the hill (Figure 103). The square was excavated in arbitrary ten centimeter levels as we had no surficial indication whether the area had ever been plowed before or not. The square was excavated to a depth which was culturally sterile. A total of two levels was excavated to a total depth of 13.7 centimeters below the surface. Excavations were ceased at that point when a heavy, tenacious, culturally-sterile clay was reached. The area had been plowed, and all cultural material was confined to the plowzone. Excavations were ceased at that point.

The stratigraphy in the square was the result of soil horization. An Ap-horizon extended from the surface to the limits of the excavation (13.7 centimeters below the surface). A B2t-horizon extended for an undetermined depth below that point. All cultural material was confined to the Ap-horizon and was disturbed. Additional excavations were not considered necessary as they would be essentially unproductive.

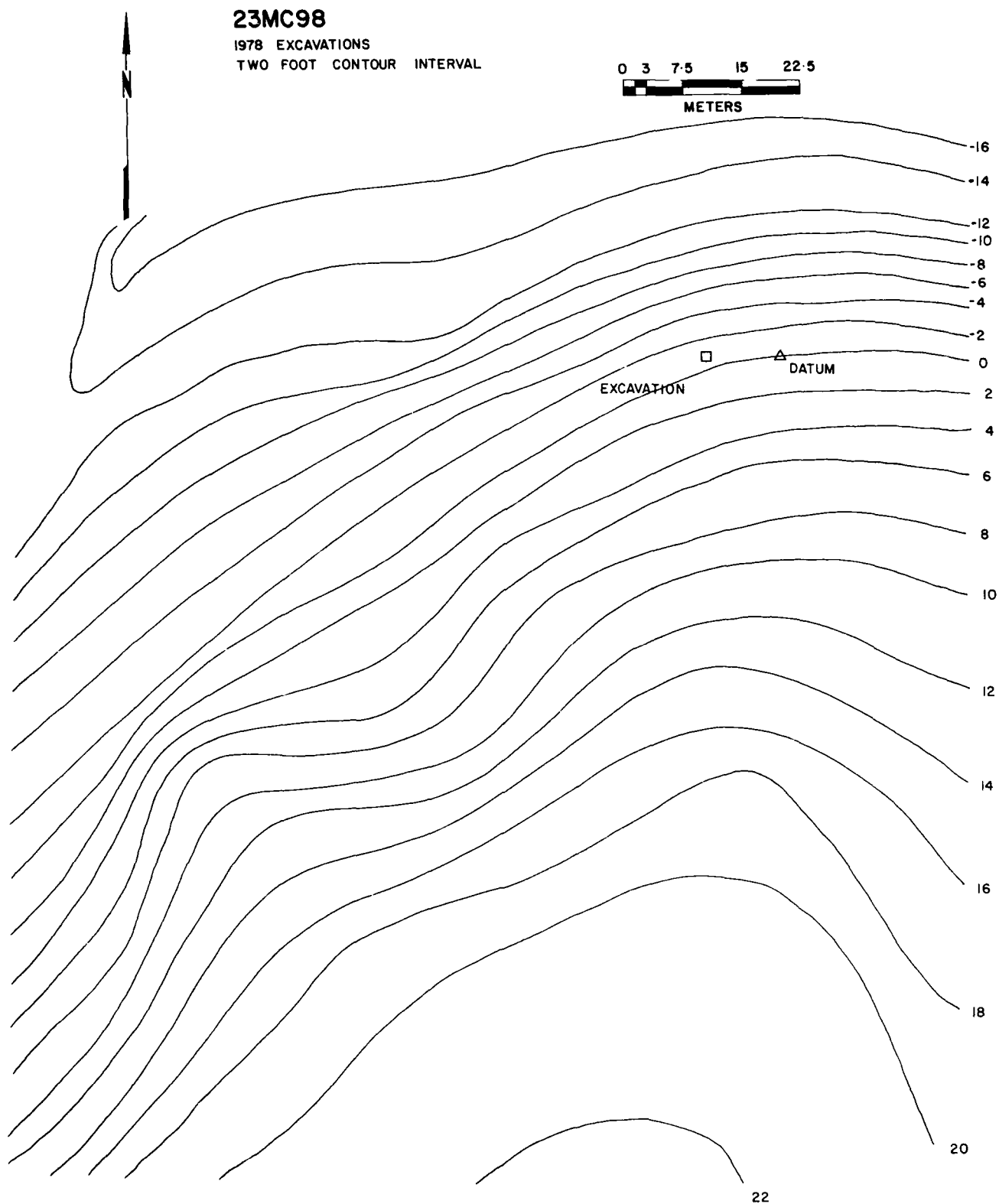


Figure 103. 23MC98. Site map and location of excavations.

Description of Materials

Lithic Waste

Group 134: Chert Waste - 24

A total of eight unmodified chert flakes, and one piece of unmodified chert shatter were recovered from the excavations. Surface material included thirteen unmodified chert flakes and two unmodified pieces of chert shatter.

Group 135: Quartzite Waste - 1

A single unmodified quartzite flake was recovered from the surface.

Group 141: Fire-cracked Rock - 37

Fire cracked rock is the term utilized for thermally altered stone. A total of pieces of fire-cracked rock were recovered from the excavations.

Group 142: Unmodified Stone - 1,309

The specimens in this category lack any evidence of intentional or unintentional cultural modification. These include residual materials in the soil as well as some residual materials which have been unintentionally transported to the site.

TABLE 48

DISTRIBUTIONAL SUMMARY - 23MC98

	134	135	141	142
Xu 102, L. I	8	-	25	561
L. II	1	-	12	648
Surface	15	1	-	-

The Site Assemblage: 23MC98

Little can be said of the recovered material. None of the materials is diagnostic of any chronological period, site function, or of seasonality. Likewise, previous surface collections on the site (Grantham 1977) did not recover any temporally diagnostic materials.

Chert waste and fire-cracked rock were typically recovered from hunting camps in the reservoir area (cf. Grantham 1977). However, the sample size from the site is relatively small, and no tools have been recovered from the site. Most of the sites just to the north of the site (23MC99 - 105) are to be hunting camps, and it is tempting to say that this site is one as well. However, such a designation based on the materials recovered would be highly tenuous.

This site lies near the juncture of two large intermittent streams. Hill slopes to the north and south of the site are steep. The site does not extend out to the end of the hill although occasional material was recovered from that area. The main body of the site is located some 350 feet west of the end of that hill. The intermittent stream north of the site flows near the base of the hill while the stream to the south of the site is approximately 400 feet away. The size of the site is estimated to be 800 feet north-south by 300 feet east-west. The elevation of the site is 790-800 feet m.s.l. Vegetation consisted of dense grass and secondary growth in the center of the site. The areas to the north and south along the edges of the site had been impacted by clearing of trees in connection with the construction of the marina. Surface material was collected from these areas. Material density was moderate, and the site still appeared to be in a relatively good state of preservation.

Testing of the site was considered necessary due to the large number of flakes from black/dark navy blue chert. As we wished to test our hypothesis outlined in the survey report (Grantham 1977) regarding the location of this resource, testing of the site would help gather necessary data. Only limited excavations were planned, as we expected that this would yield sufficient data to fill our needs for our tests.

Two, one and one-half meter squares were laid out for excavation (Figure 104). As the area was forested in scrub oak, it appeared that the site area had not been previously plowed. It was therefore decided that excavations would proceed in arbitrary ten centimeter levels from the surface. Two, ten centimeter levels were excavated in one square, and three, ten centimeter levels were excavated in the other square. Clearing of the site area had removed much of the A1-horizon in the area of the first square, resulting in the shallower depth of testing.

No cultural stratigraphy was noted in the excavations. Deposits were fairly uniform throughout. The only physical stratigraphy noted was the result of soil horization. An A1-horizon extended from the surface to a depth of approximately eight centimeters below the surface in the relatively undisturbed square. The A1-horizon in the other square was only two to three centimeters in depth. A B1-horizon extended from that point to a depth of approximately 17 to 20 centimeters below the A-horizon. A

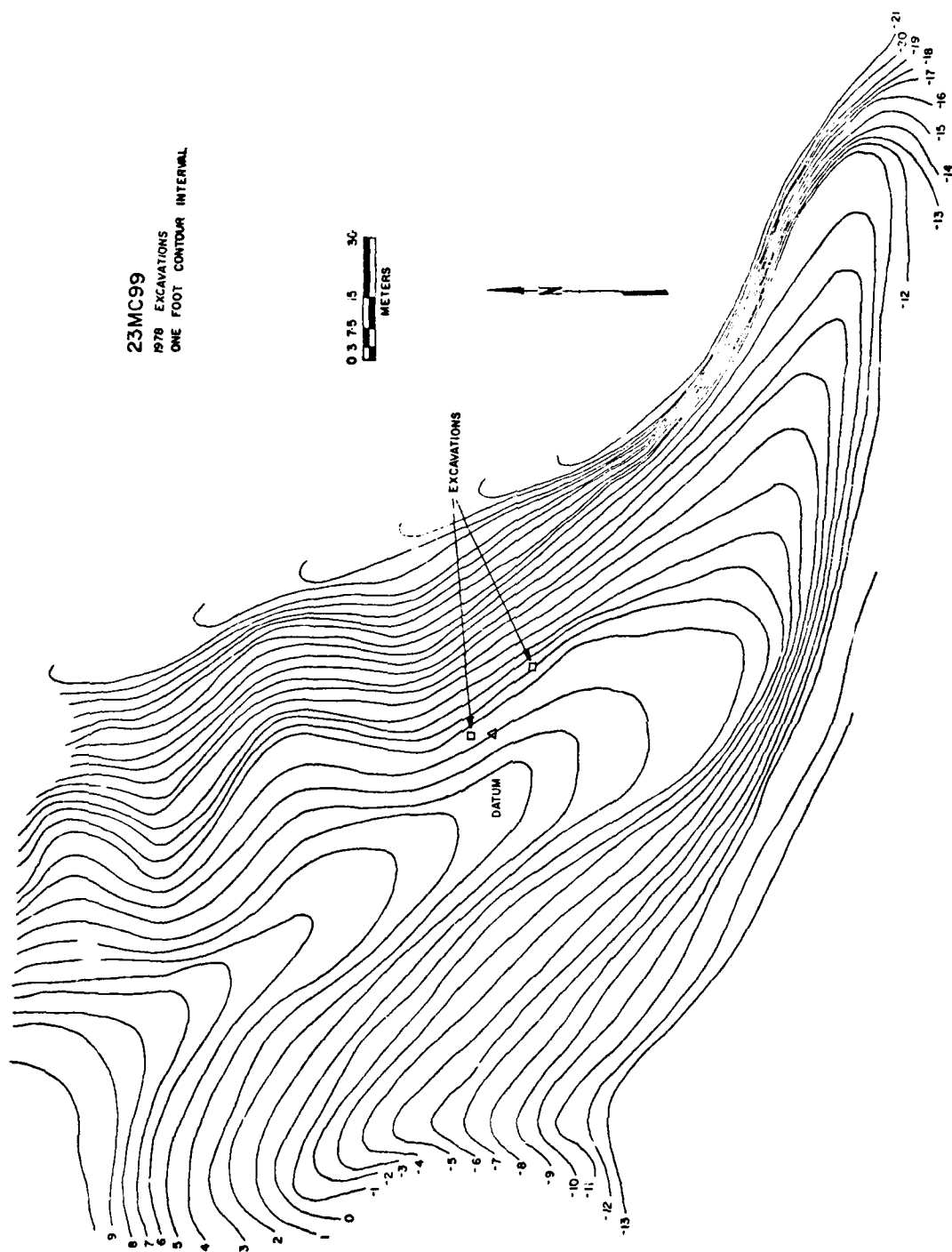


Figure 104. 23MC99. Site map and location of excavations.

B2t-horizon extended for an undetermined depth below that point.

The excavations had not reached a culturally sterile level, but material density had sharply decreased. Excavation had also become difficult due to the presence of the heavy, tenacious clay level of the B2t-horizon. Excavations were continued with shovel skimming below that depth, but little additional material was apparent. Excavations were halted, and the shovel skim matrix was not screened. Time limitations did not allow us to open a larger area.

Description of Materials

Bifaces and Biface Fragments

Group 75:a-b Miscellaneous Thin Biface Fragments - 2

These specimens are too small to be able to determine what types of tools are represented. They exhibit no external attributes other than bifacial flaking which would allow their inclusion in any other category. Both specimens exhibit primary and secondary flaking. One specimen (75:a) exhibits two stress fractures, and the other specimen (75:b) exhibits one stress fracture and a compound fracture.

Lithic Waste

Group 134: Chert Waste - 58

A total of 21 unmodified chert flakes and five pieces of unmodified chert shatter were recovered from the excavations. Surface material included 22 unmodified chert flakes and 10 pieces of unmodified chert shatter.

Group 135: Quartzite Waste - 2

Two quartzite flakes were recovered from the surface.

Group 136: Quartz Waste - 1

A single quartz flake was recovered from the surface.

Group 141: Fire-cracked Rock - 44

A total of 39 pieces of fire-cracked or heat-discolored stone were recovered from the surface and five pieces of thermally altered stone were recovered from the surface.

Group 142: Unmodified Stone - 83

All materials were recovered from the excavations. Glacial material is largely incidental inclusions in the soil, although a small amount of material may have been accidentally transported to the site.

TABLE 49

	75	134	135	136	141	142
Xul02, L. I	-	8	-	-	3	26
L. II	-	4	-	-	6	17
L. III	-	-	-	-	2	4
Xul03, L. I	-	-	-	-	16	25
L. II	-	-	-	-	12	11
Surface	2	32	2	1	5	-

The Site Assemblage: 23MC99

None of the material recovered lends itself to the identification of the components present on the site. Earlier surface collections on the site (Grantham 1977) likewise did not recover any temporally diagnostic artifacts. The materials recovered also are not particularly indicative of the activities on the site. With the exception of the two biface fragments, all of the materials recovered are waste materials or unmodified stone. Little can be said about the activities on the site. However, the chert waste, quartzite waste, and quartz waste have numbers which are roughly equatable with the number recovered from 23MC66 to the east. Likewise, the numbers of fire-cracked rock are low by comparison with large seasonal sites in the area (cf. 23MC55, this volume). As the numbers of these materials compare favorably with that recovered from 23MC66 (cf. Grantham 1979), it indicates that the sites are probably functionally similar.

While a portion of the site was still intact, much of the area had been impacted. The areas along both the northern and southern edges had been cleared. The area north of the site had been impacted by dredging for the marina. At the time of the testing, the central portion of the site area was still relatively intact. The present status of the area is unknown. The development of the

marina will, however, completely destroy the site area. Wave erosion along the northern edge should not be severe, but wave erosion along the southern edge will probably be more severe.

This site lies on the right (west) bank of the East Fork and faces onto an old meander loop cut of the river. This area apparently filled slowly and has produced an area which stood in water for a considerable part of the year. This area was bottomland prairie. The site lies on a hill which slopes slowly down toward the bottomland. The river originally flowed some 220 feet east of the site area. The site is separated from other hills in the area by a deep draw to the north and by a small wash to the south. The size of the site is estimated to be 400 feet northwest-southeast by 170 northeast-southwest. The elevation of the site is approximately 770-800 feet m.s.l. Vegetation consisted of dense grass with a small amount of secondary growth, and visibility was generally very poor. There was a bulldozer cut road running along the southern edge of the site, and surface material was collected from this area only. Material had been highly mixed and no real assessment of the density of material could be made. The remainder of the site was in a good state of preservation. Material was recovered from the top of the hill all the way down to the flood plain.

This site had been and was being impacted at the time of the testing of the site. There had been a bulldozer cut for a roadway to transfer waste out of the marina. This waste had been scattered throughout the area, and the entire area has been slated for development as a beach. Thus, we wished to make an assessment of the site prior to these major developments. The site area is part of a series of sites which border an area of Wabash clay which would have supported bottomland prairie vegetation. Thus, the site lies in a relatively unique environmental area. While we wished to help fill in some of the gaps in our settlement-subsistence systems model, the testing program would not lend itself to gathering a great amount of usable information. Our only objective was to determine the relative condition of the site, as larger excavations on one of the sites in this series bordering the area of bottomland prairie had already been conducted (Grantham 1979).

One, one and one-half meter square was laid out for excavation. The square was placed roughly near the center of the site on the flat portion of the crest of the hill (Figure 105). The square was excavated in arbitrary ten centimeter levels. We did not believe, due mainly to the topography, that the site area had ever been plowed. A total of two, ten centimeter levels were excavated to a total depth of twenty centimeters below the surface.

23MC100
1978 EXCAVATIONS
ONE FOOT CONTOUR INTERVAL

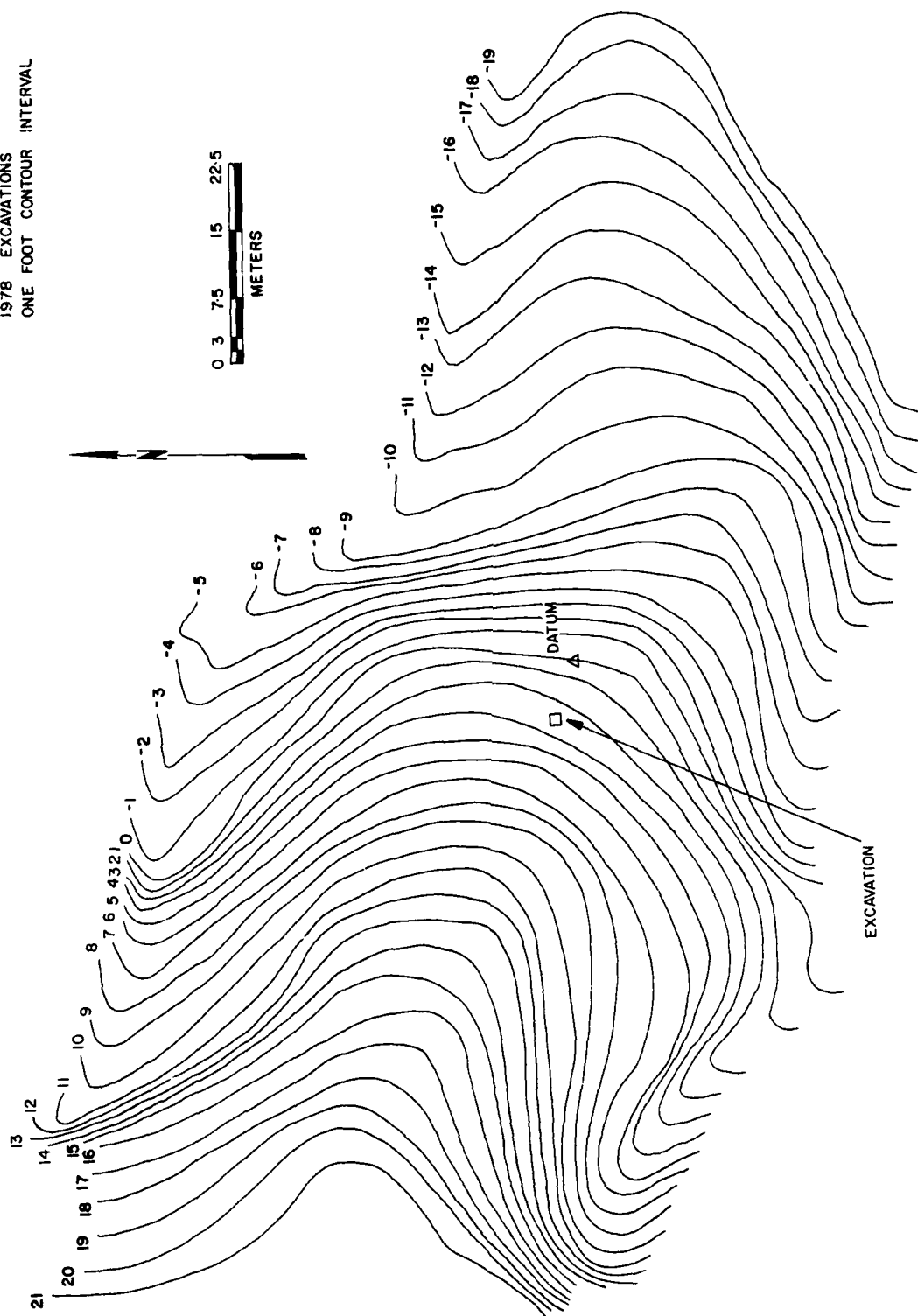


Figure 105. 23MC100. Site map and location of excavations.

Although sterile deposits had not been reached, the extremely difficult nature of excavation and the very low material return indicated that a continuation of the excavations would not be profitable.

The only physical stratigraphy noted was the result of soil horization. An A1-horizon extended from the surface to a depth of approximately fifteen centimeters below the surface. A B1-horizon extended from that point to a depth greater than twenty centimeters below the surface. The general lack of material encountered at the base of the second level would, however, indicate that a B2-horizon was not much deeper. The relatively great depth of the A1-horizon could not be immediately explained. It does not appear that the area had been plowed. Rather, it would appear to be a transitional soil indicating that it had been in grass for some length of time. As material encountered was relatively rare, it was decided not to excavate a larger area.

Description of Materials

Lithic Waste

Group 134: Chert Waste - 10

A total of six unmodified chert flakes, and four pieces of unmodified chert shatter were recovered from the excavations.

Group 141: Fire-cracked Rock - 121

Fire-cracked rock is the term for thermally altered stone. A total of pieces of fire-cracked rock were recovered from the excavations, and pieces were recovered from the surface.

Group 142: Unmodified Stone - 7,164

The specimens in this category lack any evidence of intentional or unintentional cultural modification. These include residual materials in the soil as well as some residual materials which have been unintentionally transported to the site.

TABLE 50

DISTRIBUTIONAL SUMMARY - 23MC100

	134	141	142
Xul02, L. I	8	58	3343
L. II	2	61	3821
Surface	-		

The Site Assemblage: 23MC100

None of the recovered material lends itself readily to the identification of the components present on the site. Earlier surface collections on the site (Grantham 1977) recovered a small ovoid point as well as a lobed-based and a square-stemmed point. The small ovoid point is similar to the type Crisp Ovate (Chapman 1980) but the relative crudeness of the specimen and the graver-like point may indicate that the specimen was not a projectile point. The square-stemmed and lobate-based forms have broader temporal spans and are more indicative of Archaic occupations in the area. The materials recovered include largely points, a hafted scraper, and waste materials. The activities indicated include hunting and scraping, but little else can be said. The numbers and types of materials recovered in surface collections are quite similar to the materials recovered from 23MC66 (Grantham 1979). It would appear that the site represents a hunting camp. The site, appears, based on the chronological implications of the points recovered in previous collections, was intermittently occupied and that occupations were probably short in duration.

A portion of the site was still intact although much of the area had been impacted. The areas along the northern edge of the site had been cleared but were still in a good state of preservation. Even the area near the southern edge was not completely destroyed at the time of the test excavations on the site. It is not known what the present status of the site is due to the developments slated for the area. Waste had been transferred to the area of the draw to the south and along the eastern edges of the site. It appears that the construction of the beach area will probably completely destroy the site.

This site lies immediately south of 23MC100 across a shallow wash. The site lies on the right (west) bank of the East Fork and lies adjacent to an old meander loop of the river. The site overlooks an area which was bottomland prairie. The hill on which the site lies slopes slowly to moderately downward toward the floodplain. The river originally flowed some 2300 feet east of the site. The site is bounded on the north by a shallow wash and on the south by a deep draw. The size of the site is estimated to be 200 feet northwest-southeast by 70 feet northeast-southwest. The elevation of the site is approximately 770-780 feet m.s.l. Vegetation consisted of oak-hickory forest, but the area had been cleared of trees. Visibility was generally good. Material was collected from the entire surface of the site. Material density was moderate. Much of the site had been disturbed by the clearing of the trees and subsequently by the use of the site as a road. Surface material was collected from the top of the hill all the way down to the floodplain.

This site was located adjacent to 23MC100 and thus had also been impacted. The site is relatively narrow, and much of the southern edge of the site had been cut by a bulldozer for a temporary road. There was a deep road cut through 23MC100 which was used to transfer waste out of the marina. This waste was being scattered throughout the area, and the area has been slated for development as a beach. As the site will be heavily impacted should such a development occur, we wished to make an assessment of the site prior to major development. The site is one of a series of sites which border an area of Wabash clay which would have supported bottomland prairie vegetation. Thus, the site lies in a relatively unique environmental area. We did not expect that testing would produce a large volume of information usable in our settlement-subsistence model. Larger excavations had already been conducted at 23MC66 (Grantham 1979) which is the largest of this series of sites. Our main objective was to assess the relative condition of the site area north of the bulldozer cut. The southern edge of the site had been heavily impacted, but the area of the site north of the cut appeared to be in a relatively good state of preservation. It was estimated that at least one-half of the site had been heavily disturbed.

One, one and one-half meter square was laid out for excavation. The square was placed roughly one-half of the distance between the road cut through 23MC100 and the

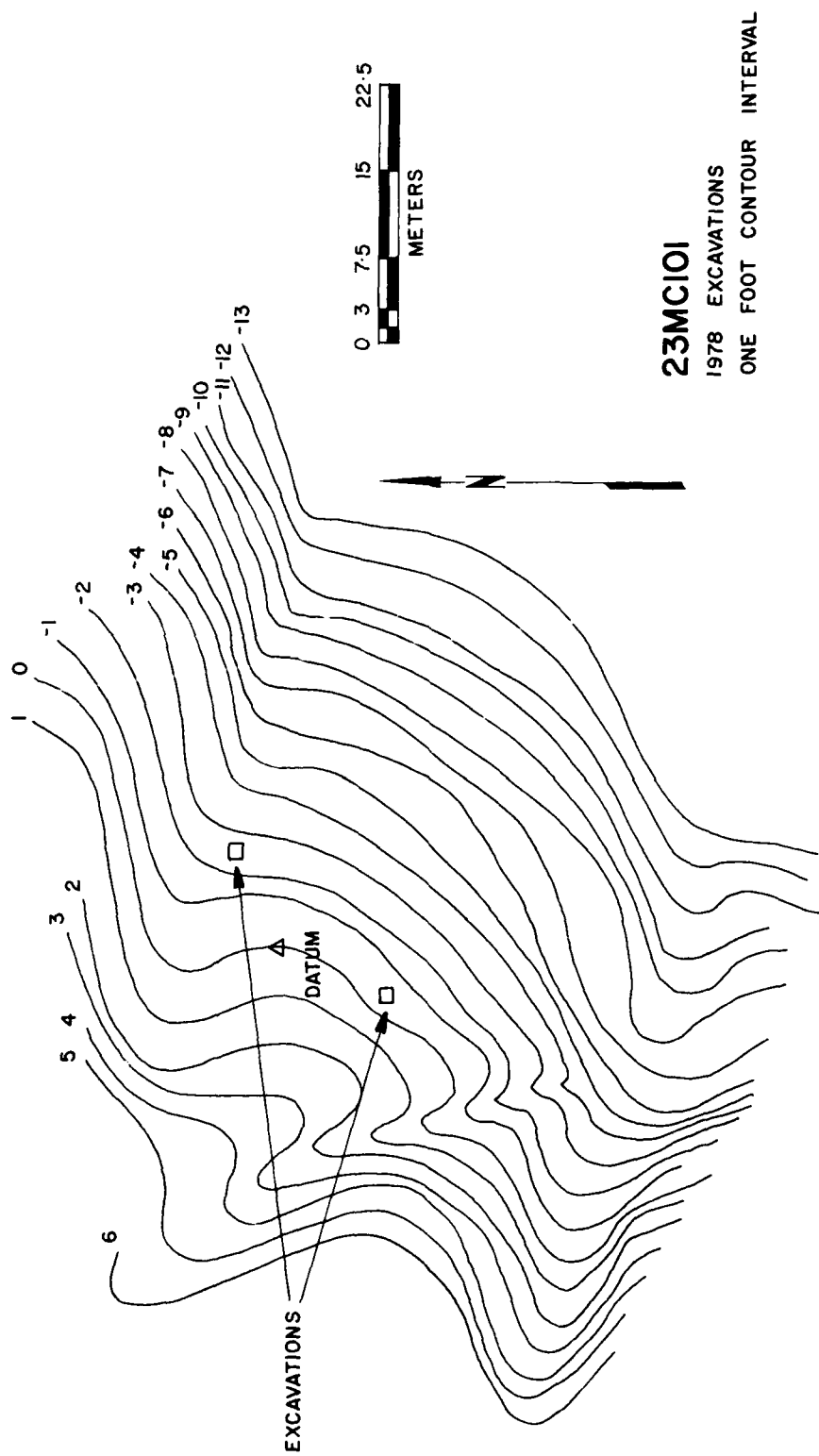


Figure 106. 23MC101. Site map and location of excavations.

bulldozer cut along the southern edge of 23MC101 (Figure 105). The square was excavated in arbitrary ten centimeter levels. We did not expect that the site area had ever been plowed due to the rolling topography in the area. A total of five, ten centimeter levels were excavated to a total depth of fifty centimeters below the surface. Although sterile deposits had not been reached, material density was becoming very low. In addition, the soil texture, the soil horization, and the amount of glacial gravel recovered indicated that the area of the excavation unit represented slope wash from areas uphill. Soil texture was sandy, and, although most glacial till is a sandy loam, the soil in the excavation unit was considerably sandier than the area to the south. Reworked sheet erosion of glacial till deposits in the area often result in heavier sand proportions. The soil profile indicated very weak horization, and the depths of soil horization were considerably greater than the surrounding area. Thus, we believed that much of the area which was still intact had been heavily modified by erosion. The higher areas to the south which would probably have been in a better state of preservation had been modified by heavy equipment.

The only physical stratigraphy noted was the result of soil horization. Soil development was relatively weak, and soil horizons were poorly defined. An A1-horizon extended from the surface to a depth of approximately twenty-six centimeters below the surface. A B1-horizon extended from that point to a depth greater than fifty centimeters below the surface. A B2-horizon may have been present near the base of the excavations, but the lack of a definable increase in illuviated clay would preclude the identification of such. The soil texture (sand as opposed to sandy loam) and the deep, weak soil horization tend to indicate that the material is erosional and has been redeposited.

Description of Materials

Points

Group 49:a Projectile Point Shoulder Segment - 1

The specimen in this group is a fragment of a projectile point with an abrupt shoulder. It exhibits secondary flake scars along the remaining lateral margin. Based on the thickness, it appears to be a fragment of a relatively large point. It exhibits a longitudinal stress fracture.

Flake Tools

Group 86:a Utilized Flake - 1

The specimen in this category is a chert flake altered by the removal of additional flake scars from the margins through use. Flake scar removal is present along both lateral margins. The specimen is a proximal flake fragment. Flake scar removal is unifacial on both margins and appears to have been utilized in a scraping motion.

Lithic Waste

Group 134: Chert Waste - 48

A total of 33 unmodified chert flakes, 13 pieces of unmodified chert shatter, and two unmodified chert potlids were recovered from the excavations.

Group 135: Quartzite Waste - 1

A single quartzite flake was recovered from the excavations.

Group 136: Quartz Waste - 2

Two quartz flakes were recovered from the excavations.

Group 137: Silicified Sediments Waste - 2

Two unmodified silicified sediments flakes were recovered.

Group 141: Fire-cracked Rock - 1,122

Fire-cracked rock is the team utilized for thermally altered stone. All material was recovered from the excavation unit. Much of this material is fire-cracked residual stone in the soil. Most material is small and does not appear to have been intentionally transported to the site.

Group 142: Unmodified Stone - 10,708

Specimens in this category exhibit no intentional or unintentional cultural modifications. Most of the material is residual stone glacial gravel in the soil.

TABLE 51

DISTRIBUTIONAL SUMMARY - 23MC101

	49	86	134	135	136	137	141	142
Xu102, L.1	-	-	18	1	1	-	272	3061
L.2	-	-	15	-	1	2	335	2460
L.3	1	-	11	-	-	-	300	2434
L.4	-	1	1	-	-	-	113	1448
L.5	-	-	3	-	-	-	102	1305

The Site Assemblage: 23MC101

None of the material recovered is temporally diagnostic. Earlier surface collections (Grantham 1977) also did not yield any temporally diagnostic material. The specimen in Group 49 is indicative of hunting, but our sample size is far too small to be meaningful. The specimen in Group 86 appears to have been utilized in a scraping motion.

The remainder of the recovered materials are lithic waste. The use of a variety of materials including quartzite, quartz, and silicified sediments as well as chert is indicative of the use of local materials. The fire-cracked rock consists mainly of small fire-cracked residual gravel. Little of the material is large enough to indicate that it was intentionally transported to the site. The large amount of unmodified stone is the result of residual gravel present in the soil. Based on the materials recovered in the excavation and previous surface collections, the site appears to be a small hunting camp quite similar to 23MC66 and most of the other sites in this complex.

This site lies just south and west of 23MC101 across the deep draw. The site lies on the right (west) bank of the East Fork and faces out onto an old meander loop of the river. The area of the floodplain below the site was originally bottomland prairie. The hill on which the site lies is small and is steep-sided toward deep draws on the northern and southern edges of the site. The river originally flowed along the other edge of the floodplain, some 2500 feet to the east. The size of the site is estimated to be 190 feet northwest-southeast by 100 feet northeast-southwest. The elevation of the site is 785-805 feet m.s.l. Vegetation consisted of dense grass pasture, and visibility was poor. The slope edge of the site had apparently been in forest, and these had been cleared. Visibility in these areas was good. Material had been collected from the cleared areas only. Material density was not high. Material appeared to be confined largely to the upper portion of the hill.

This site is located to the west of 23MC101 and up the hill. It is separated from the other sites in the area by two deep washes. The site area was relatively small compared with other sites in the area. The site was to be heavily impacted by a proposed beach development in the area. The site is one of a series of sites which border an area of Wabash clay which would have supported bottomland prairie vegetation. Thus, the site lies near a relatively unique environmental setting. Our main objective in attempting to test the site was to assess the relative condition of the site. Large excavations on a similar site (23MC66) had already been undertaken (Grantham 1979), and the low artifact yield of these sites did not indicate that large excavation blocks on any of these sites would be productive.

One, one and one-half meter square was laid out for excavation. The square was placed near the eastern edge of the site above the break in the slope (Figure 107). The square was excavated in arbitrary ten centimeter levels. We did not expect that the site area ever been plowed due to the rolling topography of the area. Only approximately one-half of one ten centimeter level was excavated on the site. Due to the extremely adverse excavation conditions, large quantities of glacial gravel present, and the extremely low artifact return, the excavation unit was abandoned.

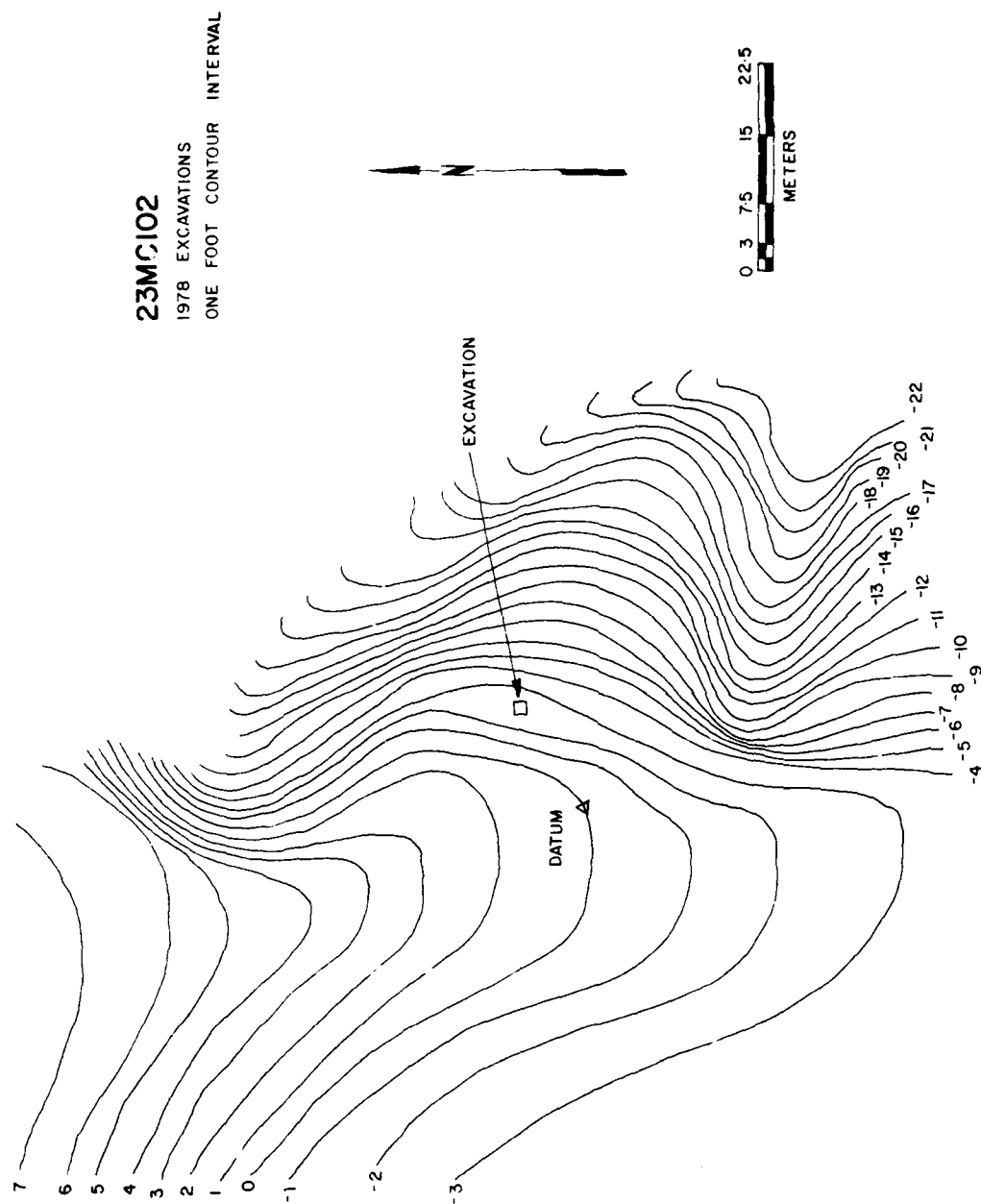


Figure 107. 23MC102. Site map and location of excavations.

Description of Materials

Points

Group 47:a Distal Projectile Point Fragment - 1

There is a single specimen in this category. The chipping pattern consists only of secondary pressure flaking. Primary flaking, if present, is not detectable. The specimen exhibits a heavy, stepped impact fracture at the distal end. The proximal end exhibits a compound transverse fracture.

Biface Fragments

Group 75:a-c Miscellaneous Thin Biface Fragments - 3

This category consists of miscellaneous thin biface fragments too small to be able to determine what kind of tool they represent. They exhibit no external attributes which would allow their inclusion in any other category. One specimen exhibits primary and secondary flaking, and two specimens exhibit primary flaking only. All three specimens exhibit a variety of compound fractures.

Flake Tools

Group 86:a Utilized Flake - 1

The specimen in this category exhibits utilization in the form of minute flake removal along the flake margin through utilization. The specimen is a medial flake segment. The specimen exhibits one utilized flake margin. Flake removal is unifacial-unilateral indicating use in a scraping motion. The utilized flake margin is acute. The specimen exhibits relatively heavy utilization.

Ceramics

Pottery - 1

Sample - 1 highly eroded body sherd.

Group 128

Ceramics Three:

Sand and grit-tempered.

Paste:

Temper: Highly rounded, sand-sized particles, mainly quartz and plagioclase with a small amount of grit temper. Sand particles are generally small (.1 to .6 mm). Grit particles likewise are not large (1 to 2 mm).

Texture: Paste is generally friable. Lamination occurs roughly parallel to the interior-exterior surfaces. Sherds break irregularly.

Color: Color is light reddish brown (5YR6/3) on interior-exterior surfaces with the core light brownish gray (10YR6/2).

Method of Manufacture: Undetermined.

Surface Finish: Undetermined.

Decoration: Undetermined.

Form: Undetermined.

Lithic Waste

Group 134: Chert Waste - 20

A total of two unmodified chert flakes were recovered from the excavation. Surface material included 16 unmodified chert flakes and two pieces of unmodified chert shatter.

Group 135: Quartzite Waste - 1

A single unmodified quartzite flake was recovered from the surface.

Group 141: Fire-cracked Rock - 23

Fire-cracked rock is the term utilized for thermally altered stone. A total of 22 pieces were recovered from the excavation, and one piece was recovered from the surface.

Group 142: Unmodified Stone - 726

The specimens in this category lack any evidence of intentional or unintentional cultural modification. These include residual materials in the soil as well as residual materials unintentionally transported to the site.

TABLE 52

DISTRIBUTIONAL SUMMARY - 23MC 102

	47	75	86	128	134	135	141	142
Xu102, L. I	-	-	-	-	2	-	22	724
Surface	1	3	1	1	18	1	1	2

The Site Assemblage: 23MC102

The material recovered from the site does not readily lend itself to the identification of the components present on the site. The single sherd would tend to indicate that there may have been a Woodland component on the site. The distal point fragment would indicate that hunting was an activity on the site. Previous surface collections on the site (Grantham 1977) recovered a small corner-notched, straight-based point which is quite similar to the type Koster Corner-notched (Perino 1971a). It would appear that there was at least a Late Woodland component on the site, but a single projectile point is a rather tenuous basis for the assignment of components. The number and type of tools recovered from the surface collections as well as the test excavations are quite similar to the materials recovered from 23MC66 (Grantham 1979). It would appear that the site represents a hunting camp. We do not have any basis for determining the periodicity or length of occupations on the site, however.

The site is in a good state of preservation. It had not yet been substantially impacted at the time of the testing of the site. It is anticipated, however, that the developments in the area (i.e. the marina to the north and the beach in the area) will have a substantial impact on the site. The present status of the site is unknown.

This site lies on the right (west) bank of the East Fork across a deep draw from 23MC102. The site faces onto an old meander loop of the river which originally supported bottomland prairie. The site lies on a small hill at the northwest corner of 23MC66 and is separated from that site by a deep draw. The river originally flowed along the eastern edge of the floodplain some 2500 feet away. The size of the site is estimated to be 190 feet northwest-southeast by 100 feet northeast-southwest. The elevation of the site is 780-800 feet m.s.l. Vegetation consisted of dense grass, and visibility was poor. The slope edges appeared to have been in forest but had been stripped. Material was collected from areas which had been cleared. Material density was moderate. Material extended all the way down to the floodplain.

This site was located in the same series of sites surrounding what was an area of bottomland prairie. The site area had already been impacted by a bulldozer cut through the site. This cut was not for a road. Waste from the marina to the west was being placed throughout the area. The site area has been slated for development as a beach. As the site will be further impacted should such a development occur, we wished to make an assessment of the site prior to major development. We did not expect that testing would produce a large amount of information usable in our settlement-subsistence model. Larger excavations had already been conducted at 23MC66 (Grantham 1979) which is the largest of this series of sites. Our main objective was to assess the relative condition of the site as well as to determine if this site was similar to the other sites in the area.

Two, one and one-half meter squares were laid out for excavation. The squares were placed in the undisturbed portion of the site west of the bulldozer cut (Figure 108). The squares were excavated in arbitrary ten centimeter levels. We did not expect that the site area had ever been plowed due to the highly rolling topography in the area. A total of two, ten centimeter levels were excavated. Sterile deposits were reached at approximately 16.5 centimeters below the surface.

The only physical stratigraphy noted was the result of soil horization. An A1-horizon extended from the surface to a depth of 8 centimeters below the surface. A B1-horizon extended from that point to a depth of 16.5 centimeters below the surface. A B2t-horizon extended from that point to a depth greater than the limits of the excavation.

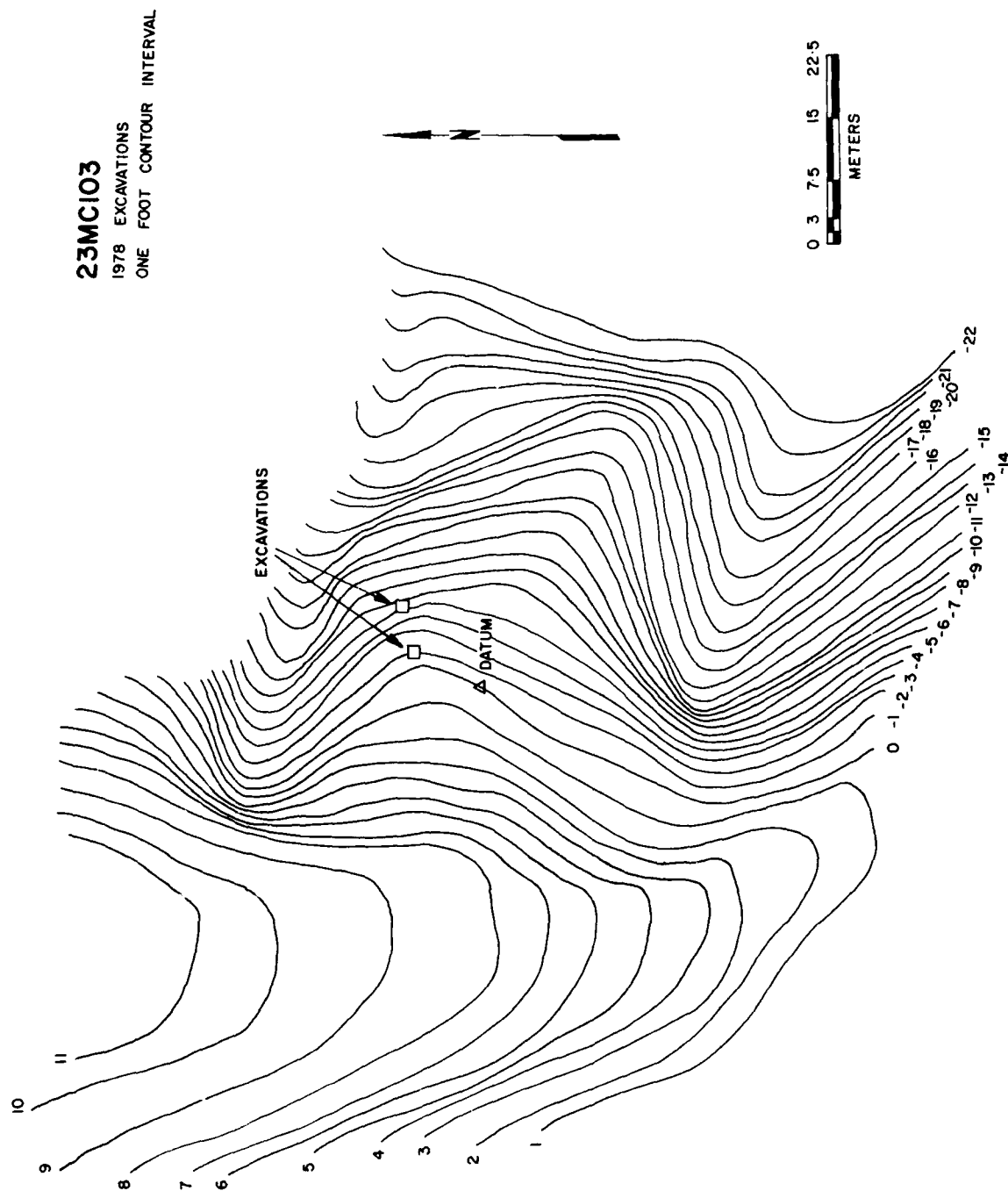


Figure 108. 23MC103. Site map and location of excavations.

Description of Materials

Points

Group 37:a Small, Side-notched Point - 1 (Figure 109, a)

The specimen in this category exhibits a straight base, rounded stem-base juncture, expanding stem, side notches, abrupt shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of secondary pressure flaking only. Secondary flake scars are small, generally lamellar, fairly even in size, and fairly consistent in distribution. Notches are created by the removal of multiple pressure flakes. Final notch flakes were removed from the same face. Blank material was a flake based on the relative thickness of the specimen.

Group 21:a Small, Side and Basal-notched Point - 1 (Figure 109, b)

The specimen in this category exhibits a straight base, straight lateral margins, a single basal notch, single side notches about one-quarter the distance up the sides, and a bi-convex cross-section. The specimen exhibits secondary pressure flaking only. Flake scars are small, lamellar to slightly expanding, uneven in size, and inconsistent in distribution. Notches are created by the removal of multiple pressure flakes. Final notch flakes on the sides originate from alternate faces. Blank material consists of a chert flake based on the relative thickness of the specimen. There is a transverse stress fracture near the distal end and probably represents an impact fracture.

Bifaces and Biface Fragments

Group 68:a Proximal Fragment - Thin, Broad Biface with Rounded Base - 1 (Figure 109, c)

The specimen in this category exhibits a rounded base, convex lateral margins, and a bi-convex cross-section. The specimen is relatively large in size. The chipping pattern consists of primary percussion and secondary pressure flaking. The specimen lacks any observable wear. It exhibits a compound transverse fracture.

Group 75:a Miscellaneous Thin Biface Fragment - 1

This category consists of a single thin biface fragment too small to be able to determine what kind of tool it represents. It exhibits no external attributes which would allow its inclusion in any other category. The chipping pattern consists of primary percussion and secondary pressure flaking. The specimen exhibits highly irregular heat spall fractures.

Flake Tools

Group 86:a-c Utilized Flakes - 3

The specimens in this category exhibit utilization in the form of minute flake removal along the flake margins through utilization. Only one specimen is complete. One specimen is a proximal fragment, and one is a lateral fragment. All three specimens have acute working elements. One specimen (86:a) exhibits bifacial-bilateral flake removal and appears to have been utilized in a cutting motion. The other two specimens exhibit unifacial-bilateral wear and appear to have been utilized in a scraping motion. None exhibit heavy utilization.

Ground and Pecked Stone

Group 92:a End Battered Cobble - 1

The specimen in this category exhibits battering on both ends. Battering consists of moderate to heavy edge crushing. Battering is relatively heavy. The specimen was utilized with direct percussion on dense materials.

Lithic Waste

Group 134: Chert Waste - 74

A total of thirteen unmodified chert flakes and seven pieces of unmodified chert shatter were recovered from the excavations. Surface material included 44 unmodified chert flakes and 10 pieces of unmodified chert shatter.

Group 141: Fire-cracked Rock - 159

A total of 147 pieces of fire-cracked rock were recovered from the excavation, and twelve pieces were recovered from the surface.

Group 142: Unmodified Stone - 1297

The specimens in this category lack any evidence of intentional or unintentional cultural modification. These include largely residual materials in the soil as well as some residual materials which have been unintentionally transported to the site.

Historic

Group 144:a-b Miscellaneous Historic Materials - 2

A total of two pieces of historic material was recovered from one excavation unit. Historic material consists of two fragments of a fence post stable.

TABLE 53
Artifact Measurements and Attributes - 23MC103

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Projectile Points</u>					
<u>Small, Side and Basal-notched Point</u>					
21:a	Sur.	14*	15	3	1g* impact fractured
<u>Small, Corner-notched Point</u>					
37:a	Sur.	22	13	4	1g
<u>Biface Fragments</u>					
<u>Proximal Fragment - Thin Broad Biface with Rounded Base</u>					
68:a	Sur.	32*	38*	8*	12g* proximal fragment
<u>Ground and Pecked Stone</u>					
<u>Battered Stone</u>					
91:a	Sur.	77	53	31	231g Quartzite 2b

TABLE 54
DISTRIBUTIONAL SUMMARY - 23MC103

	21	37	68	75	86	92	134	141	142	144
Xu102, L.1	-	-	-	-	-	-	3	56	124	-
L.2	-	-	-	-	-	-	2	16	258	-
Xu103, L.1	-	-	-	-	-	-	6	21	628	-
L.2	-	-	-	-	-	-	9	52	287	2
Surface	2	1	1	1	3	1	54	12	-	-

The Site Assemblage: 23MC103

The specimen in Group 37 is closest to the type Klunk Side-notched (Perino 1973). Similar material was recovered from the Pigeon Roost Creek site (O'Brien and Warren 1979:241) and from a large number of Late Woodland sites in the Cannon reservoir (Hunt 1976). Perino (1971a) estimated that a rough ordering of micro-points from western Illinois should be Klunk, Koster, and Schild with unnotched triangular points occurring later in time. Perino (1971a) estimated that a chronological range from A.D. 500-900 for Klunk Side-notched occurred there. Dates from the Pigeon Roost Creek site on levels with Klunk Side-notched were A.D. 1360 $\pm$ 90 and A.D. 1400 $\pm$ 100 (O'Brien and Warren 1979: 236). This would tend to indicate that these forms in the micro-point tradition may have lasted considerably longer in northeastern Missouri than Perino's estimate.

The specimen in Group 21 is similar to a number of specimens from northeastern Missouri (Eichenberger 1977: Fig. 4; Eichenberger 1956). They are common on Mississippian sites in the Kansas City area and were recovered from Vandiver Mound (Shippee 1972: Fig. 6), from the Steed-Kisker site (Shippee 1972: Fig. 12, Fig. 15), from the Thompson site (Shippee 1972: Fig. 18), and from 23PL11 (Shippee 1972: Fig. 19). They also are common on Mississippian sites in southwestern Missouri. They were recovered from the Mount India Cairn (Wood 1961: Fig. 6), from the Fairfield Mound Group (Wood 1961: Fig. 7), from Blackwell Cave (Wood 1961: Fig. 15), and from Vista Shelter (Wood 1961: Fig. 17).

Both of the projectile points are indicative of late contexts. The specimen in Group 58 lacks any observable wear and appears to have been a preform for another tool. The flake tools (Group 86) have been utilized in both cutting and scraping activities. The specimen in Group 92 was utilized in direct contact with dense materials and does not appear to have been connected with plant processing.

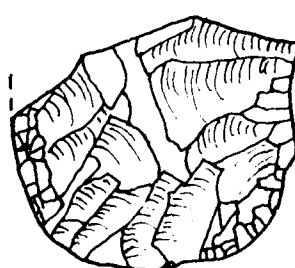
The number and type of tools recovered from the surface and in excavations are quite similar in nature to those recovered from 23MC66 (Grantham 1979). It would appear that similar activities were carried out on the site and that it represents a hunting camp as well.



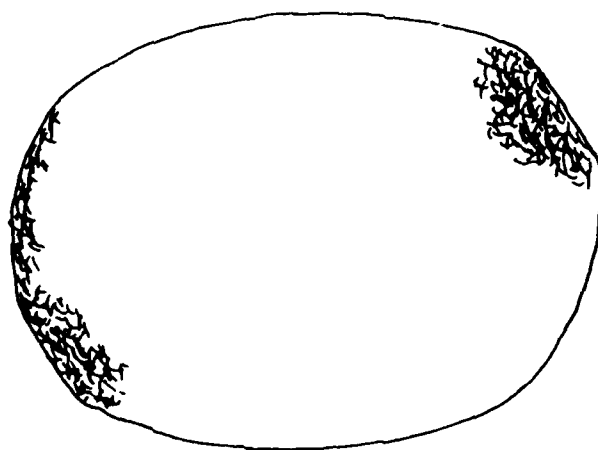
a



b



c



d

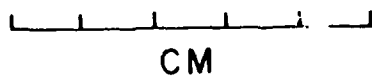


Figure 109. 23MC103. Artifacts. (a) Group 37, (b) Group 21, (c) Group 68, (d) Group 92.

This site lies on the right (west) bank of the East Fork. The site lies at the northern end of an old meander loop of the river which filled slowly and supported bottomland prairie vegetation. The site lies on a long tapering hill which slopes slowly uphill from the floodplain. The site lies just south of an old dirt section road. The hill on which the site lies is bounded on the north by a broad intermittent stream and to the south by a narrow, deep draw. The river originally flowed some 1650 feet east of the site area. The size of the site is estimated to be 450 feet east-west by 180 feet north-south. The elevation of the site is 772-802 feet m.s.l. Vegetation consisted of dense grass pasture on the eastern portion and grass and weeds on the western portion. Visibility was very poor. Surface material on the survey was collected from an erosional area and along a fence row which had been bulldozed out (Grantham 1977). Material density could not adequately be determined but appeared to be fairly low. The eastern portion of the site had been plowed while the western portion of the site appeared to be relatively undisturbed.

We intended to test the site, as the area will probably be impacted by the development of the beach. The site area is the northernmost of a group of sites surrounding an area of bottomland prairie. The size of the site was comparable with a number of sites in a similar setting (cf. 23MC100, 23MC101, this volume). As several of these sites had been tested and one had had larger excavations (23MC66, Grantham 1979), we intended only to test the site. As the site area would be inundated and the western edge would be impacted by the development of a beach, we wished to test the site. Our main objective was to assess the relative condition of the site and to gain a sample of materials for comparative purposes. The material density on all of these sites was relatively low. Larger excavations on 23MC66 (Grantham 1979) had already been undertaken, and larger excavations on this site would be unproductive.

One, one and one-half meter square was laid out for excavation. The square was placed near the eastern edge of the site just east of the old fence line (Figure 110). The square was to be excavated in arbitrary, ten centimeter levels. We expected that the site area had been previously plowed, but it was not possible to adequately determine this from surficial indications.

When excavations were begun, it became rapidly apparent that erosion to the area was severe. While the area

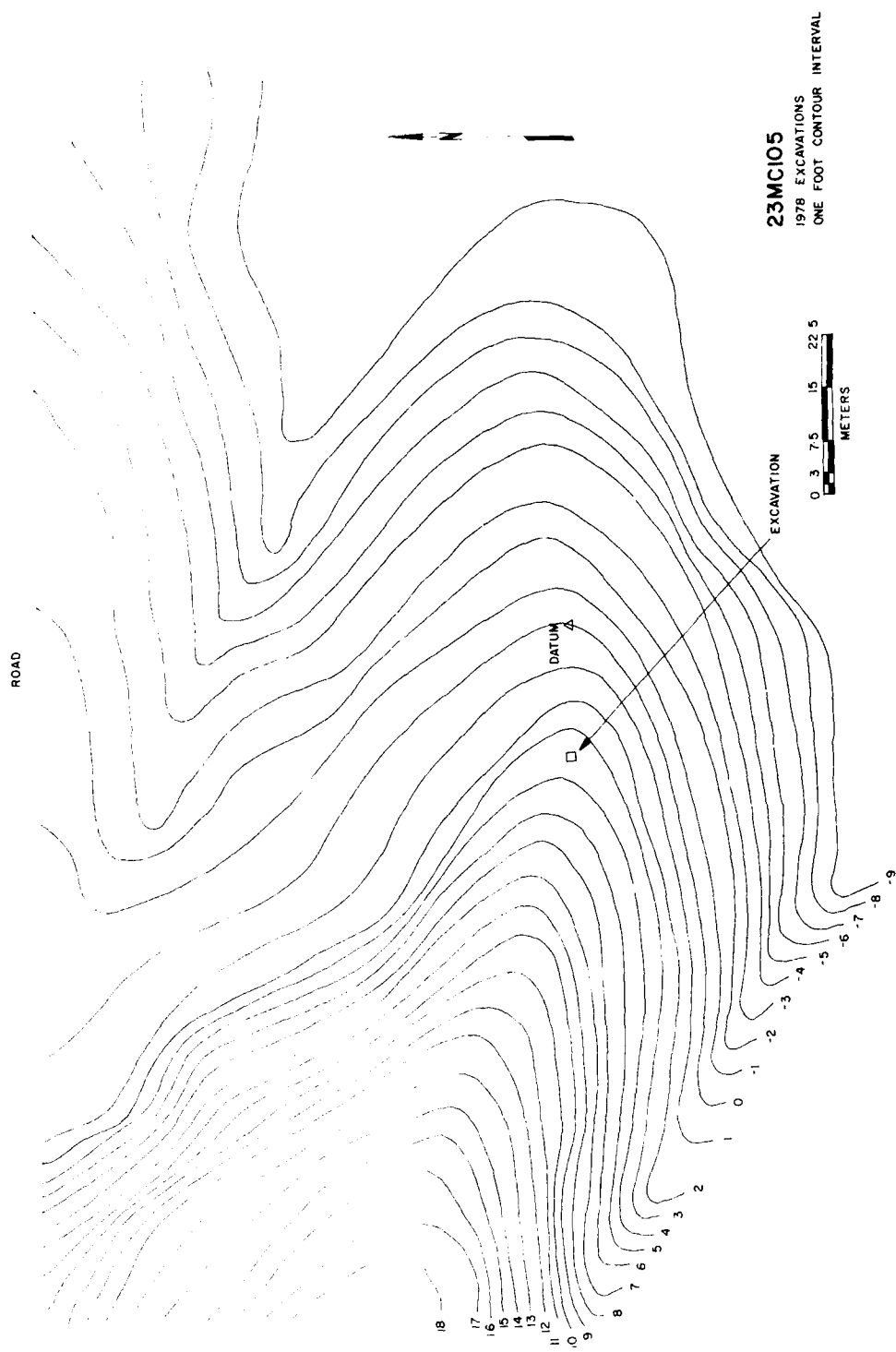


Figure 110. 23MC105. Site map and location of excavations.

appeared to have been plowed, the plowzone was very shallow, only three to six centimeters in depth. The A-horizon was noticeably absent across the excavated area. Dense, clayey B2t-horizon materials were present in the plowzone, and remainder of the level was in culturally sterile B2t-horizon clays. Erosion had removed all of the A-horizon, and a B1-horizon, if present, had also been eroded away. The soil was far too clayey to be screenable. It was decided that the excavated area was far too disturbed to generate a good sample of materials, and most, if not all, of the eastern edge of the site had experienced severe erosion. The excavation unit was abandoned, and no further excavations were planned for the site.

This site lies on the left (east) bank of the East Fork approximately 600 feet south of Axtel road. The site lies on a high hill overlooking an old meander loop area of the river. The site area is broken to the northwest by a deeply incised intermittent stream and to the east by a small wash. Slopes are steep to the northwest and south; moderate to the east. The river presently lies some 620 feet to the southwest. The size of the site is estimated to be 200 feet east-west by 200 feet northeast-southwest. The elevation of the site is 825-842 feet m.s.l. Vegetation consisted of dense grass and weeds, and visibility was very poor. Material density was moderate. It could not be adequately determined if the site had been plowed or not. A few areas of severe erosion occur along the southern edge of the site.

Testing of the site was desired as much of the site area will be destroyed by the construction of a boat ramp. Surface visibility at the time of survey (Grantham 1977) was relatively poor, and material was recovered from shovel tests only. Thus, we had little information on the chronological placement and function of the site. Material density was not high. We wished to make an assessment of the relative density of materials. As we were only going to test the site, we did not anticipate that a great amount of data would be generated. As the site will be heavily impacted by proposed construction, a larger area would be excavated if significant deposits were encountered.

One, one and one-half meter square was laid out for excavation. The square was placed near the southern edge of the site (Figure 111). The square was excavated in arbitrary ten centimeter levels. We did not know if the site area had ever been plowed, but it appeared doubtful. The square was excavated to a depth which was culturally sterile. A total of two levels were excavated to a depth of twenty centimeters below the surface. Excavations were ceased at that point when a heavy, tenacious, culturally sterile clay was reached.

The only physical stratigraphy noted was the result of soil horization. Soil development was well demarcated and all soil boundaries were sharp. An A1-horizon extended from the surface to a depth of approximately ten centimeters below the surface. A B1-horizon extended from that point to a depth of approximately twenty centimeters below the surface. A B2-horizon extended from that point to an undetermined depth.

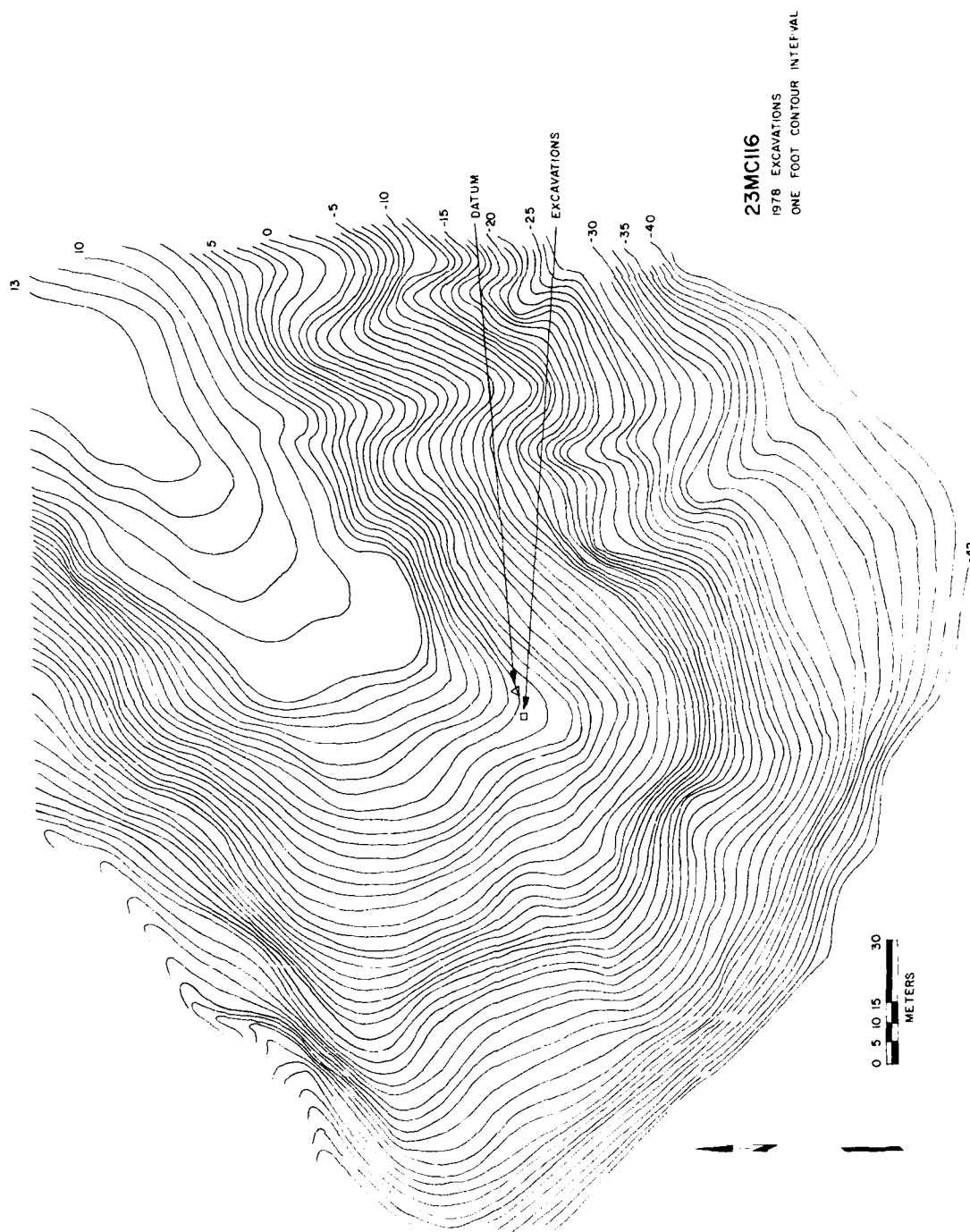


Figure 111. 23MC116. Site map and location of excavations.

Description of Materials

Lithic Waste

Group 134: Chert Waste - 18

A total of 16 unmodified chert flakes and two pieces of unmodified chert shatter were recovered from the excavations.

Group 141: Fire-cracked Rock - 77

Fire-cracked rock is the term utilized for thermally altered stone. All recovered material comes from the excavations.

Group 141: Unmodified Stone - 230

The specimens in this category lack any evidence of intentional or intentional cultural modification. These include soil residual materials as well as some residual materials which have been unintentionally transported to the site.

Historic

Group 144:a Miscellaneous Historic Material - 1

A single piece of historic material was recovered from the excavation. The specimen is a brass cartridge. It measures .343 calibre.

Table 55

DISTRIBUTIONAL SUMMARY - 23MC116

	134	141	142	144
XU102, L. I	2	27	134	-
L. II	16	50	96	1

The Site Assemblage: 23MC116

The material recovered from the site does not lend itself readily to the identification of the components present on the site. Previous surface collections (Grantham 1977) on the site likewise did not yield any temporally diagnostic material. Those collections did, however, recover a quartzite metate. This would tend to indicate that plant processing occurred on the site, but we have little indication of its relative importance. Our sample from the test excavations does not provide any further meaningful statements regarding site function. Material density was high.

Much of the site is well preserved. There were heavily eroded areas along the eastern and southern edges of the site. It is anticipated that the proposed boat ramp will heavily impact, if not destroy, the site.

This site lies on the left (east) bank of the East Fork. The hill on which the site lies is a small, low hill bounded to the north by a narrow, deep draw and to the south by a broad, deep draw. Slopes to the west are steep and are being actively eroded by the river which originally flowed along that edge. Slopes to the north and south are moderate steep. The size of the site is estimated to be 300 feet northeast-southwest by 100 feet northwest-southeast. The elevation of the site is 790-810 feet m.s.l. Vegetation consisted of dense grass pasture, and visibility was poor. Surface material was collected from a cleared area along the western edge of the site. Material density was moderate. It could not adequately be determined if the site had been plowed.

Testing of the site was desired as much of the site will be destroyed by the construction of a proposed beach. Surface visibility at the time of the survey (Grantham 1977) was relatively poor, and material was recovered only from barer areas along the western edge of the site. Only lithic waste was recovered from the surface. Thus, we had little information on the chronological placement of the site or its function. Material density was not high. We wished only to make an assessment of the relative density of materials and attempt to define chronological placement and site function. As we were only going to test the site, we did not anticipate that a great amount of data would be generated.

Two, one and one-half meter squares were laid out for excavation. The squares were placed along the southern and central portions of the site (Figure 112). The squares were excavated in arbitrary ten centimeter levels. We did not know if the site area had ever been plowed. The squares were excavated to a depth which was culturally sterile. A single ten centimeter level was excavated in both squares. Excavations ceased at that point when a heavy, culturally sterile clay was reached.

The only physical stratigraphy noted was the result of soil horization. An A1-horizon extended from the surface to a depth of approximately ten centimeters below the surface. A B2-horizon extended from that point to an undetermined depth. It still could not adequately be determined whether the area had been plowed. The lack of a B1-horizon typical in the area and the very shallow depth of deposits tends to indicate that erosion on the site is moderate to severe.



Figure 112. 23MC117. Site map and location of excavations.

Description of Materials

P-122

Group 33:a Small, Corner-notched Point - 1 proximal fragment (Figure 113, a)

The specimen in this category exhibits a convex base, rounded stem-base juncture, expanding stem, broad corner notches, abrupt shoulders, straight lateral margins, and a bi-convex cross-section. The chipping pattern consists of secondary pressure flaking only. Flakes scars are small, generally lamellar, uneven in size, and inconsistent in distribution. The notches were created by the removal of multiple pressure flakes. Final notch flakes originate from alternate faces. The specimen exhibits a transverse stress fracture.

Group 47:a-b Distal Projectile Point Fragments - 2 (Figure 113, b-c)

The specimens in this category vary from an entire blade segment to a half blade segment. Both specimens exhibit transverse stress fractures. Specimen 47:a exhibits both primary and secondary flaking. Specimen 47:b exhibits secondary flaking only but is too fragmentary to be able to ascertain if primary flaking was present.

Drill-like Implement

Group 54:a Drill-like Implement - 1 medial fragment (Figure 113, e)

The specimen in this category exhibits a narrow parallel-sided working element. The working element is thick and was worked largely by pressure flaking. The specimen exhibits little or no observable wear. It exhibits one transverse stress fracture and a compound transverse fracture across an inclusion in the chert.

Biface Fragments

Group 68:a Proximal Fragment - Thin, Broad Biface with Rounded Base - 1 (Figure 113, d)

The specimen in this category exhibits a rounded base, straight lateral margins, and a bi-convex cross-section. The specimen exhibits primary percussion flaking and

secondary pressure flaking. The specimen exhibits light wear on the distal end. Wear consists of slight edge crushing and edge rounding. One large flake has been removed from the distal end, apparently through utilization.

Group 75:l-d Miscellaneous Thin Biface Fragments - 4

This category consists of miscellaneous thin biface fragments too small to be able to determine what kind of tool they represent. They exhibit no external attributes which would allow their inclusion in any other category. The chipping pattern consists of primary percussion and secondary pressure flaking on at least two specimens. Two specimens are too small to be able to determine if primary flaking is present. Two specimens exhibit double compound fractures; one specimen exhibits two transverse stress fractures; and one specimen exhibits three compound fractures.

Cores

Group 73:a-b Core Fragments - 2

The specimens included in this category are fragments of cores. They exhibit all the external criteria of cores with one or more faces representing fracture planes or stress fractures present. It appears that most are fragments of polyhedral cores. Flakes appear to have been removed by heavy percussion. Both specimens still retain small areas of cortex.

Ground and Pecked Stone

Group 95:a Ground, Pecked, and Battered Stone - 1
(Figure 113, f)

The specimen in this category exhibits one ground face, one pecked face, and two battered ends and one battered edge. The pecking on the face is relatively light and diffuse. The degree of force is not heavy. The specimen exhibits one ground face on the same face as the pecked face. Grinding has removed cortex from the entire face. No obvious striations or polish were noted. Battering is apparent on both opposing ends. Battering is relatively heavy but not intense. Battering was relatively heavy in force with edge crushing and some edge shattering present. The number of battering loci are not, however, numerous. Battering is present along one edge at the juncture of the face and edge. Battering along the edge consists of slight

edge crushing with small flakes driven onto the face and down the edge. Edge rounding is also present. The edge appears to have been utilized in a chopping motion.

Ceramics

Group 133:a Burned Clay - 1

The specimen in this category is clay which has been fired either intentionally or unintentionally. It differs from pottery in that it lacks temper. The specimen is eroded and highly irregular in shape.

Lithic Waste

Group 134: Chert Waste - 90

A total of 36 unmodified chert flakes and 7 pieces of unmodified chert shatter were recovered from the excavations. Surface material included 45 unmodified chert flakes and one piece of unmodified chert shatter.

Group 136: Quartz Waste - 1

A single unmodified quartz flake was recovered from the surface.

Group 141: Fire-cracked Rock - 266

Fire-cracked rock is the term used for thermally altered stone. A total of 251 pieces of fire-cracked rock were recovered from the excavations. Surface material included fifteen pieces of fire-cracked rock.

Group 142: Unmodified Stone - 50

The specimens in this category lack any evidence of intentional or unintentional cultural modification. These appear largely to be materials which have been unintentionally transported to the site.

TABLE 56

Artifact Measurements and Attributes - 23MC117

Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Projectile Points</u>					
<u>Small, Corner-notched Point</u>					
33:a	103	17*	18	5	2g* proximal fragment
<u>Distal Projectile Point Fragments</u>					
47:a	103	52*	27	10	14g* distal fragment
47:b	103	22*	20*	6*	2g* distal fragment
<u>Drill-like Implements</u>					
54:a	Sur.	7*	13*	7*	1g* medial fragment
<u>Biface Fragments</u>					
<u>Proximal Fragment - Thin, Broad Biface with Rounded Base</u>					
68:a	Sur.	41*	29	11*	27g* proximal fragment
<u>Ground and Pecked Stone</u>					
<u>Ground, Pecked and Battered Stone</u>					
96:a	Sur.	120	73	48	791g Argillite lp, lg, 3b

TABLE 57

DISTRIBUTIONAL SUMMARY - 23MC117

	33	47	54	68	75	78	86	96	133	134	136	141	142
Xul02, L.1	1	2	-	-	1	-	-	-	-	27	-	45	20
Xul04, L.1	-	-	-	-	-	-	-	-	1	16	-	206	30
Surface	-	-	1	1	3	2	2	1	-	47	1	15	-

The Site Assemblage: 23MC117

The specimen in Group 33 is similar to the type Koster Corner-notched (Perino 1971a:100) and is common in Late Woodland contexts (cf. Category 1 - 23MC69-4, this volume). The two distal projectile point fragments appear to have been from considerably larger points. The biface fragment in Group 68 was part of a completed tool. The function of the tool is unknown, although the type of wear and the probable removal of a flake through utilization would tend to indicate that it was used in a chopping motion with the axis of utilization parallel to the longitudinal axis. The number of biface fragments appears to be typical of the area and indicates a long use-life and heavy reuse of tools until too fragmentary to be useable.

The drill-like implement (Group 54) indicates another activity on the site. Although no wear is readily apparent on the specimen, morphologically similar specimens are generally classed as drills or reamers. The utilized flakes (Group 86) have been utilized in a scraping motion rather than the preponderance of flakes indicative of cutting present on most of the sites in the area. The core fragments (Group 73) indicate the use of local sources of raw material. Their low number tends to indicate that little reliance was placed on local materials.

The ground, pecked, and battered stone in Group 96 indicates that plant processing did occur on the site. The sample size is relatively small, and we have no indication of the relative importance of hunting and plant processing in the economy. Plant processing was, however, as important as on fall seasonal sites in the area.

Most of the rest of the recovered materials are waste materials and are not particularly informative. The chert waste is characterized by biface trimming, thinning, and retouch flakes. The percentages of local and non-local chert types were not calculated. Quartz waste also indicates the use of local sources of raw materials. The large numbers of fire-cracked rock indicate that thermal activities, probably connected with cooking, were important on the site.

The excavations indicate that moderate to severe erosion has occurred on the site. Although there was no evidence that the site area had ever been plowed, the absence of a B1-horizon and in places an A1-horizon would indicate that the state of preservation of materials on the site is relatively poor.

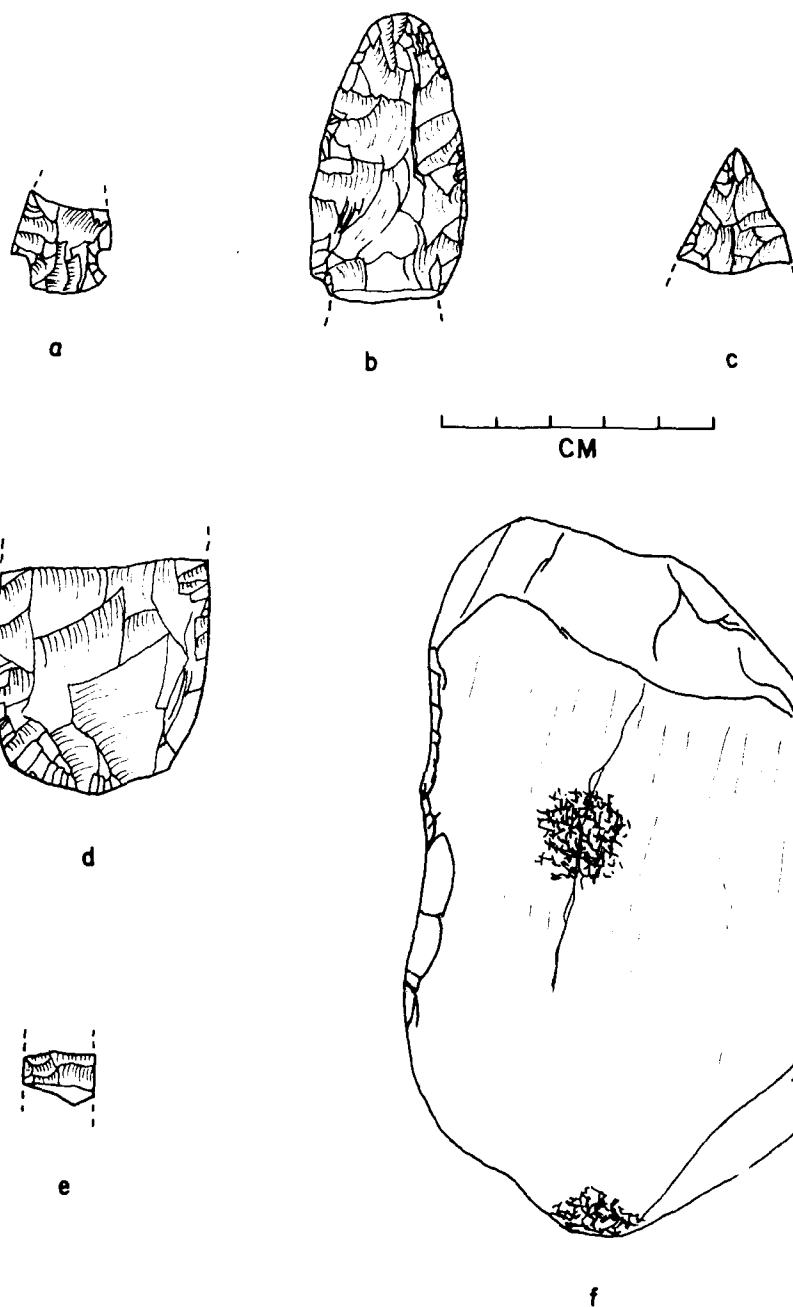


Figure 113. 23MC117. Artifacts. (a) Group 33, (b-c) Group 47, (d) Group 68, (e) Group 54, (f) Group 96.

This site lies on the left (east) bank of the East Fork across the broad meander loop cut from 23MC119. The site lies on a low hill near the edge of the floodplain. There is a small intermittent stream just south of the hill. Slopes are steep to the north; moderate to the west of the site. The size of the site is estimated to be 180 feet east-west by 100 feet north-south. The elevation of the site is 785-800 feet m.s.l. Vegetation consisted of dense grass and secondary growth. Most of the secondary growth was removed under the clearing contract. Visibility at the time of testing was good. Material density was high. It could not be adequately determined if the site had been plowed, but it did not appear to have been.

Excavations on the site were planned as the areas will fall within or immediately adjacent to a proposed beach. In addition, the site lies immediately above and below multipurpose level, and it was estimated that shoreline erosion would be severe. The site lies on the east side of the reservoir across a broad portion of the floodplain. Such areas in other reservoirs in the vicinity experience relatively severe erosion.

Two, one and one-half meter squares were laid out for excavation. One square was placed near the western edge of the site below the multipurpose pool level, and the other square was placed upslope to the east just above the level of the multipurpose pool (Figure 114). As the site area was forested originally, it was doubtful that the area had ever been plowed. Squares were excavated in arbitrary ten centimeter levels and were excavated to a depth which was culturally sterile. Only two, ten centimeter levels were excavated in both squares. Excavations ceased at that point when a dense culturally sterile clay was reached.

The only physical stratigraphy was the result of soil horization. An A1-horizon extended from the surface to a depth of six to eight centimeters below the surface. A B1-horizon extended from that point to a depth of eighteen to twenty centimeters below the surface. A dense B2t-horizon extended for an undetermined depth below that.

There was no apparent cultural stratigraphy, and deposits were fairly uniform throughout, although there was an apparent rapid decrease in material density from the surface downward. Most of the lower portions of level two in both squares was nearly devoid of cultural material.

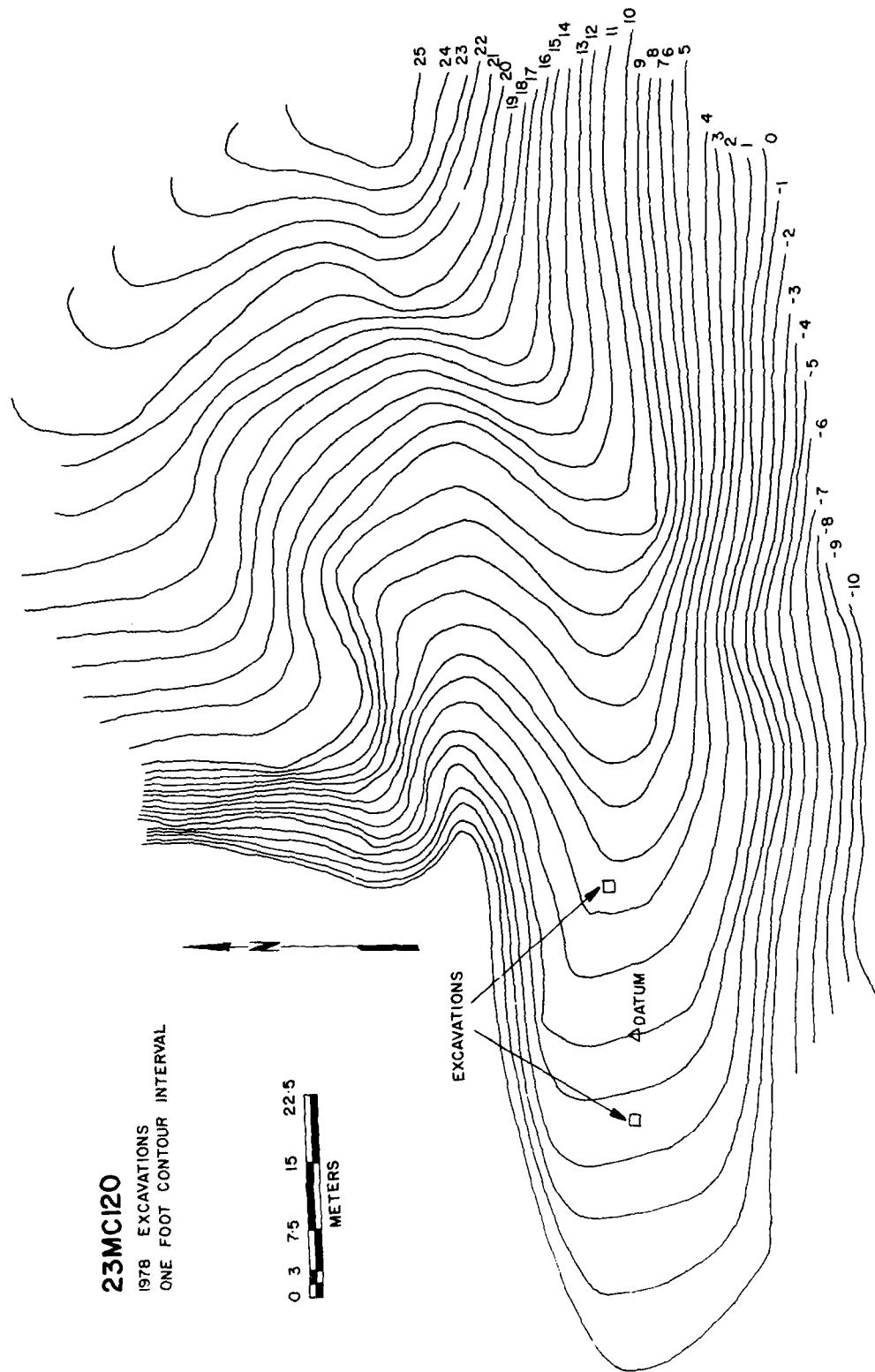


Figure 114. 23MC120. Site map and location of excavations.

Description of Materials

Points

Group 34:a-b Medium, Corner-notched Points - 2 proximal fragments (Figure 115, a-b)

The specimens in this group exhibit straight to slightly concave bases, sharp stem-base junctures, expanding stems, weakly oblique to oblique shoulders, straight to slightly convex lateral margins, and bi-convex cross-sections. The chipping pattern consists of secondary pressure flaking only. Flake scars are small to medium, lamellar to expanding, uneven in size, and inconsistent in distribution. Secondary flaking on the lateral margins of specimen 34:b are lamellar, even in size, and consistent in distribution. Blank material in both cases appear to have been chert flakes based on chipping pattern and thickness. Specimen 34:a also exhibits a small island of the original flake scar on one face. Specimen 34:a exhibits a transverse stress fracture and a longitudinal fracture through one notch. Specimen 34:b exhibits an impact fracture and a compound fracture removing one shoulder and a part of the base.

Group 47:a Distal Projectile Point Fragment - 1

The specimen in this group is a small fragment of a projectile point. The specimen exhibits secondary flaking only. The specimen exhibits a very small impact fracture and a transverse stress fracture.

Scrapers

Group 51:a End Scraper Made From a Flake - 1
(Figure 115, c)

The specimen in this category was manufactured from a flake. It exhibits a smooth ventral face with flake removal from the entire dorsal surface. It exhibits secondary flake scars over the surface with finer secondary retouch along one edge and the distal end. Wear on the distal end consists of step fracturing up the dorsal surface as well as slight edge rounding. There is a small stress fracture near the proximal end but would not have affected tool performance.

Bifaces and Biface Fragments

Group 62:a Large Ovate Biface - 1 (Figure 115, d)

The specimen in this category is roughly ovate in outline, and is relatively large in size. The chipping pattern consists of primary percussion flaking only. Flake scars are large, generally expanding, uneven in size, and inconsistent in distribution. The lateral margins still retain sinuous edges. It exhibits little or no wear. Raw material is quartzite.

Group 75:a-b Miscellaneous Thin Biface Fragments - 2

The specimens in this category are biface fragments too small to be able to determine what type of tool is represented. They exhibit no external attributes which would allow their inclusion in any other category. Both specimens exhibit both primary and secondary flake scars. One specimen exhibits a multiple compound fracture, and the other specimen exhibits intersecting stress fractures.

Cores

Group 77:a Chert Polyhedral Core - 1

The specimen in this category exhibits multiple flakes removed in an irregular fashion. The specimen still retains some cortex. Flakes have been struck off with heavy percussion from multiple platforms, and there is no pattern to flake removal.

Group 78:a Chert Core Fragment - 1

The specimen in this category is a fragment of a larger core. It exhibits all of the external criteria of cores as well as one face representing a stress fracture. The shape of the original core is uncertain. The morphology of the remaining portion of the core is such that it was probably a polyhedral core.

Flake Tools

Group 84:a Retouched Flake - 1 (Figure 115, e)

The specimen exhibits intentional modifications of the flake margins by the removal of additional flakes. The specimen is fragmentary. It exhibits bifacial-bilateral retouch. Retouch scars cover most of the face toward the

distal end, but islands of the original flake surfaces are present toward the proximal end. It exhibits little or no wear.

Group 86:a-b Utilized Flakes - 2

Specimens in this category exhibit utilization in the form of minute flake removal along the flake margin through utilization. Both specimens are fragmentary. The specimens exhibit relatively acute flake margins. Wear is unifacial on both specimens, and they appear to have been utilized in a scraping motion. The degree of wear is light to moderate, and neither was utilized for a protracted period of time.

Ground/Pecked Stone

Group 91:a Ground Stone - 1 fragment (Figure 116, a)

The specimen in this category exhibits a single ground surface. Sufficient cortex has been ground away to reveal the interior color. It exhibits relatively fine, unidirectional striations, but it lacks detectable polish. Only about one-half of the surface has been ground. The specimen is fragmentary and exhibits numerous fire-cracks.

Group 93:a Ground and Pecked Stone - 1 (Figure 116, c)

The specimen in this group exhibits one ground face and two pecked faces. It exhibits a moderate to heavy degree of pecking on the face. Individual peck marks are discernible but the degree of force was not heavy. The one ground face exhibits the heavier degree of pecking. The ground face has been only lightly ground. Cortex removal is not complete but cortex has been removed along the higher points of the surface. It lacks observable striations or polish.

Group 106:a Ground, Pecked, and Chipped Stone- 1 (Figure 116, d)

The specimen in this group exhibits one pecked and ground face. There is one chipped edge which occurred after the pecking and grinding. The pecked face exhibits relatively light pecking, and individual peck marks are not readily discernible. The face was not utilized for a protracted period of time. Grinding is not heavy. Cortex removal is not complete and occurs only along the higher points. Striations are not detectable, nor is polish apparent. One edge exhibits four large flakes removed across the ground and pecked face.

Group 107:a Metate - 1 fragment (Figure 116, b)

The specimen in this category exhibits one ground face. It is substantially larger and apparently quite thicker than most of the ground stone cobbles. It exhibits a very slightly concave surface. Sufficient surface cortex has been ground away to reveal the interior color. It exhibits weak unidirectional striations but lacks polish along the higher points on the surface. The specimen is fragmentary and exhibits numerous fire-cracks.

Hematite

Group 125:a Scratched and Ground Hematite - 1
(Figure 115, f)

The specimen in this category is a piece of specular hematite. One surface exhibits fine unidirectional striations and was ground on a fine-grained abrasive. The alternate face exhibits coarser multidirectional striations. The scratches on this surface contain both coarse and finer striations and was shaved with a chipped stone tool.

Lithic Waste

Group 134: Chert Waste - 131

A total of 36 unmodified chert flakes and 17 pieces of unmodified chert shatter were recovered from the excavations. Surface material included 75 unmodified chert flakes and 3 pieces of unmodified chert shatter.

Group 135: Quartzite Waste - 1

A single unmodified quartzite flake was recovered from the excavations.

Group 137: Silicified Sediments Waste - 1

A single silicified sediments flake was recovered from the surface.

Group 141? Fire-cracked Rock - 375

A total of 317 pieces of fire-cracked rock were recovered from the excavations. Surface material included 58 pieces of fire-cracked rock.

Group 142: Unmodified Stone - 89

A total of 83 pieces of unmodified stone were recovered from the excavations. Specimens lack any evidence of intentional or unintentional cultural modification. Specimens appear to be residual material unintentionally transported to the site.

TABLE 58
Artifact Measurements and Attributes - 23MC120

	Cat. No.	Length	Width	Thickness	Weight (gm)	Remarks
<u>Points</u>						
<u>Medium, Corner-notched Points</u>						
34:a	Sur.	15*	28*	4*	1g*	proximal fragment
34:b	Sur.	26*	24*	4*	2g*	multiple fragment
<u>Scrapers</u>						
<u>End Scraper Made from a Flake</u>						
51:a	Sur.	35*	25	9	8g*	
<u>Bifaces and Biface Fragment</u>						
<u>Large Ovate Biface</u>						
62:a	Sur.	57	49	13	26g	quartzite
<u>Ground/Pecked Stone</u>						
<u>Ground Stone</u>						
91:a	Sur.	56*	52*	30*	86g*	argillite 1g
<u>Ground and Pecked Stone</u>						
93:a	Sur.	92	85	38	385g	argillite 2p, 1g
<u>Ground, Pecked, and Chipped Stone</u>						
106:a	Sur.	109	68	36	422g	argillite 1p, 1g
<u>Metate</u>						
107:a	Sur.	89*	66*	53*	223g*	diorite 1g
<u>Hematite</u>						
<u>Scratched and Ground Hematite</u>						
125:a	Sur.	66	45	18	236g	

TABLE 59
DISTRIBUTIONAL SUMMARY - 23MC120

	34	47	51	62	75	77	78	84	86	91	93	106	107	125	134	135	137	141	142
Xul02, L.1	-	1	-	-	-	-	-	-	1	-	-	-	-	-	20	1	-	45	16
L.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	22	11
Xul03, L.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	168	34
L.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	82	22
Suface	2	-	1	1	1	1	1	1	1	1	1	1	1	1	78	-	1	58	6

The Site Assemblage: 23MC120

The specimens in Group 34 are common in the area (cf. 23MC58, 23MC149, this volume). They appear to be intermediate forms between Middle Woodland Norton or Manker Notched (White 1968:71) and later Koster Corner-notched (Perino 1971a:100). They fit well with White's (1968) subtriangular varieties, which date from late Middle Woodland through early Late Woodland. Specimens exhibit secondary pressure flaking only with chert flake blanks. This technology is similar to points later than Middle Woodland points. Similar points from the Kansas City area appear to date from the late Middle Woodland period at the Shields site (Shippee 1967) and from the Trowbridge site in Kansas (Bell 1976:34).

The distal point fragment is not particularly informative, although the chipping pattern fits well with the recovered projectile points. There appears to be only a single component late Middle Woodland/early Late Woodland component based on the recovered projectile points. The recovered end scraper (Group 51) and the specimens in Group 86 indicate that scraping activities were important on the site.

The ovate quartzite biface in Group 62 exhibits little or no wear and was probably a blank. The lateral margins still retain a sinuous edge. The specimens in Group 75 as well as the fragmentary condition of most of the recovered tools indicates a long use-life and reuse of fragmentary tools. The chert polyhedral core (Group 77) and chert core fragment (Group 78) illustrate the use of local chert resources. The percentages of local and non-local cherts was not calculated.

The ground and pecked stone in Groups 92, 93, 106, and 107 all appear to have been associated with plant processing. Pecked specimens lack evidence of use with direct contact with dense materials. Ground faces generally lack indications of protracted use. The proportions of plant processing tools is higher than several sites along the western side of the reservoir, but proportions are not as high as that recovered from high density fall seasonal sites. The ground and scratched hematite specimen in Group 125 was modified for pigment but lacks an indication of protracted use.

The remainder of the materials are lithic waste. Most of the chert flakes are biface thinning, trimming, and retouch flakes based on the size, shape, and platform preparations. The presence of quartzite and silicified

sediments waste indicate the use of local sources of raw materials. The numbers of burned and fire-cracked rock (Group 141) are relatively high and typical of small seasonal sites in the area. It is indicative of a heavy usage of stone as heat-retaining materials in thermal activities.

Based on the materials recovered, it would appear that the site is a single component late Middle Woodland/early Late Woodland site. Primary activities are hunting, plant processing, and scraping as well as tool production. The site has most of the characteristics of a small seasonal site, probably occupied in the late summer and fall. Thermal activities, possibly related to cooking, was also important on the site.

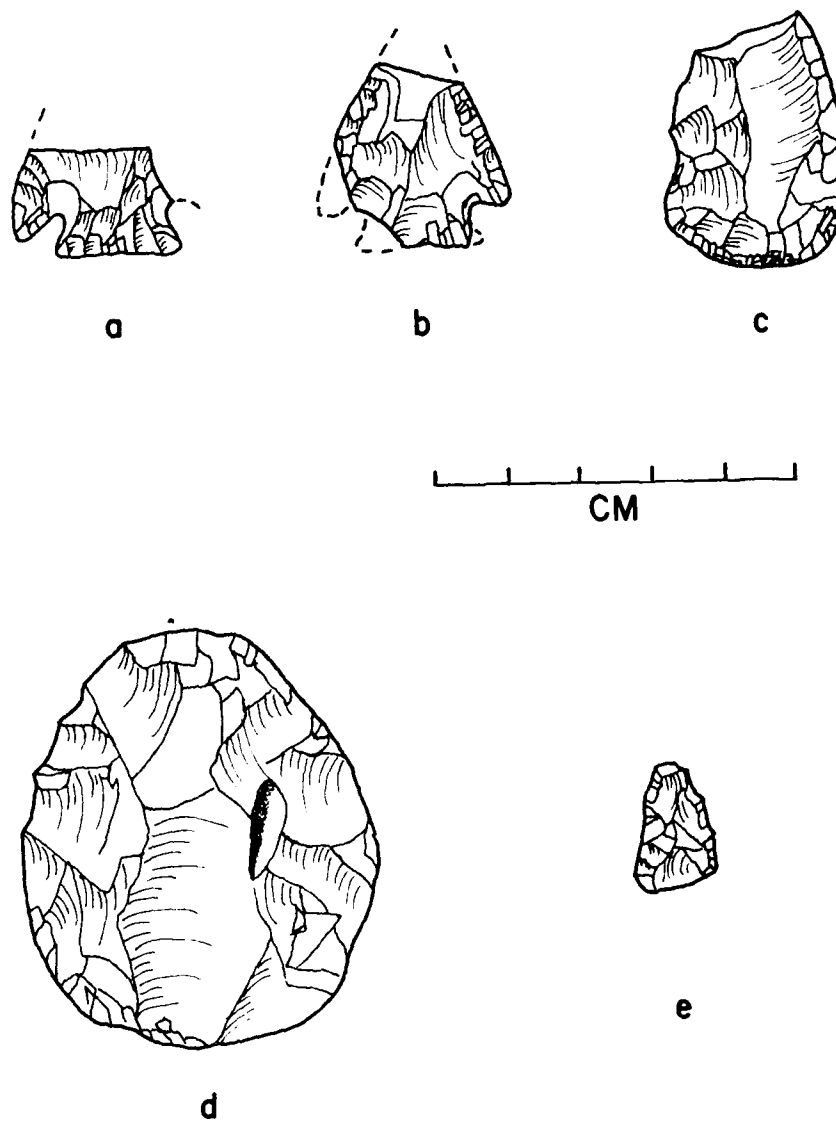


Figure 115. 23MC120. Artifacts. (a-b) Group 34, (c) Group 51, (d) Group 62, (e) Group 84, (f) Group 125.

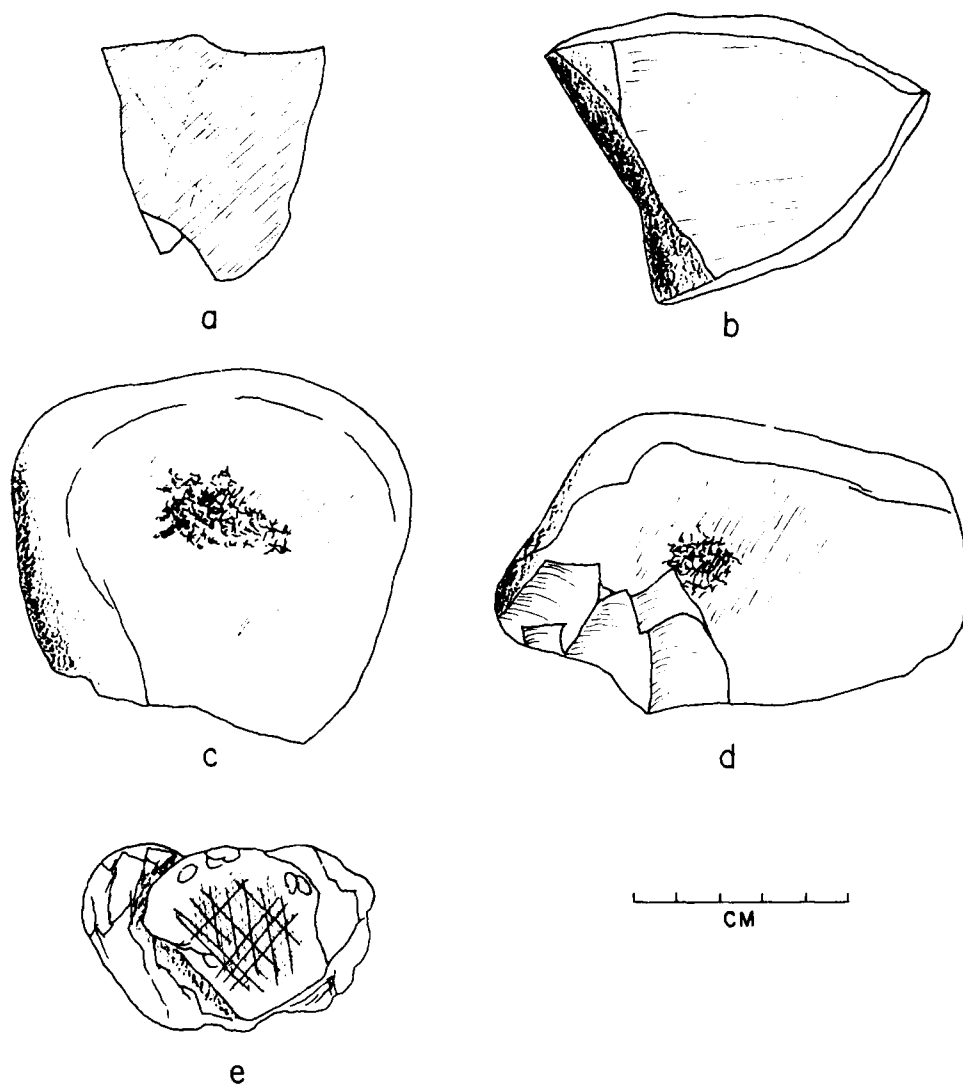


Figure 116. 23MC120. Artifacts. (a) Group 91, (b) Group 107, (c) Group 93, (d) Group 106.