Title:	Archaeological Investigations at the Puckett Site (40SW228): A Paleoindian/Early Archaic Occupation on the Cumberland River, Stewart County, Tennessee.
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ARCHAEOLOGICAL INVESTIGATIONS AT THE PUCKETT SITE (40SW228): A PALEOINDIAN/EARLY ARCHAIC OCCUPATION ON THE CUMBERLAND RIVER, STEWART COUNTY, TENNESSEE

Mark R. Norton and John B. Broster

ABSTRACT

This report presents the results of limited testing of an intact Paleoindian/Early Archaic midden in Middle Tennessee. Radiometric determinations for Dalton and Kirk Corner-Notched projectile points were obtained from this midden deposit.

Introduction

The Puckett site (40SW228) is located on the banks of Lake Barkley, within the Cross Creeks National Wildlife Refuge, in Stewart County, Tennessee (Figure 1). This location is within the floodplain of the Cumberland River near the confluence of an unnamed tributary. This portion of the Cumberland River is within the Western Highland Rim physiographic region.

The Tennessee Division of Archaeology recorded this site in February of 1991 during a reconnaissance survey along Lake Barkley to record sites reported by Mr. John Puckett. Mr. Puckett had collected a number of projectile points from this site, including Paleoindian Clovis, Beaver Lake, and Dalton, and Early Archaic Kirk Corner-Notched. The initial site visit revealed an eroded area approximately 11 meters in width and 54 meters in length. A dense scatter of lithic waste flakes was evident throughout this area. In addition, a dark, reddish clay containing lithic material and charcoal flecks was noticed within the upper beach area. These cultural indicators, coupled with the types of projectile points collected, suggested that a Paleoindian/Early Archaic midden was partially preserved at this site.

An Archaeological Resource Protection Act (ARPA) permit (No. 02-Tn-1-91) was issued to the Division of Archaeology by the U.S. Department of the Interior, Fish and Wildlife Service, to perform limited test excavations at 40SW228. The objectives of these investigations were to determine: (1) if an intact, Paleoindian/Early Archaic component exists, and (2) to obtain charred botanical remains for a radiocarbon assay.

Research Methodology

Two one meter square test units were excavated to determine the integrity and extent of the cultural deposits. The test units were trowel excavated in arbitrary levels, not exceeding twenty centimeter increments. All fill was processed through a one quarter-inch mesh screen

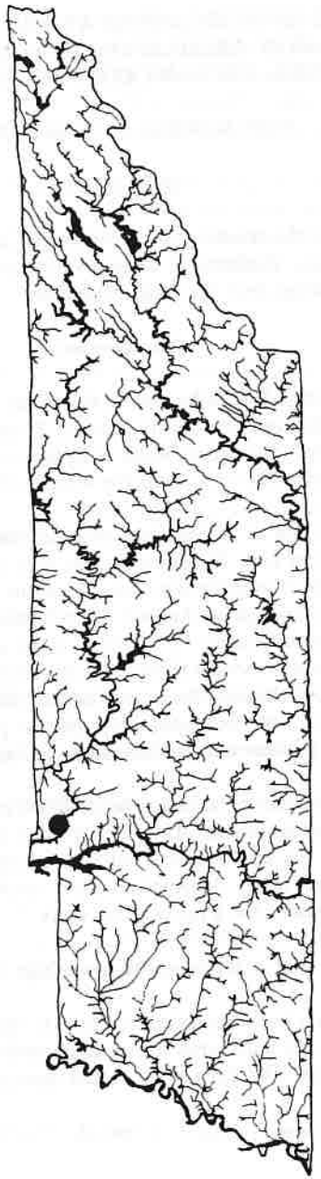

Figure 1. Location of the Puckett Site (40SW228).

for artifact recovery. Level forms, plan and profile drawings, photographs, and notes were maintained during these investigations.

The surface of the eroded area and the origins of the test units are approximately 1.45 meters below datum (concrete monument), which was placed well back from the eroded bank edge. This datum served as station A from which all transit measurements were made.

Excavation Results

Test unit 1 was placed alongside the bank, near the center of the eroded area, on the speculation that this may represent the center of the site (Figure 2). Modern botanical remains were recovered from the upper levels of this unit, suggesting that looting activities had taken place within this area. A hard packed, reddish-brown, silty-clay midden deposit containing lithic material and charcoal flecks was encountered within level four (2.25 meters below datum). The excavation of level five revealed the remains of this cultural deposit varying from 8-16 cm in depth (2.25-2.36 meters below datum)(Figure 3). Two Dalton projectile points (Figure 4) were recovered from this intact portion of the midden. Wood charcoal flecks recovered from level five were radiocarbon dated at 9,790+160 B.P. (Beta 48045, uncorrected). Light grey-brown sterile alluvium was encountered beneath this deposit. A one inch core auger was utilized to test for buried cultural deposits beneath this sterile alluvium. Three auger tests, to a depth of 70 cm below the base of level five, revealed a homogeneous, sterile silty-clay deposit.

Since looting activities were documented within test unit 1, placement of a second test unit was essential to assess the extent of the cultural deposits. A location thirteen meters east of test unit 1 was chosen due its undisturbed appearance. A portion of the bank was shovel skimmed to insure placement of this unit over intact deposits.

The excavation of test unit 2 provided insight into the integrity of this portion of the site. The southern one-third of the unit within level 1 was relatively loose, and interpreted to be disturbed from looting activities. The remainder of this level was very compact, and undisturbed. As excavations continued, the extent of the disturbance declined. A reddish-brown, silty-clay deposit, identical to that encountered in test unit 1, became apparent within level two (1.63 meters below datum). Four Kirk Corner-Notched projectile points (Figure 5) were recovered from this intact cultural midden, which varied from 69-74 cm thick (Figure 6). Wood charcoal samples recovered from level five (1.99-2.16 meters below datum) and level six (2.16-2.35 meters below datum) were radiocarbon dated at 8,490+180 B.P.(TX-7413, uncorrected) and 8,820+180 B.P.(TX-7412, uncorrected), respectively. A hard packed, sterile, grey-brown alluvium was encountered at the base of level six (2.37 meters below surface). Core auger tests to a depth of 70 cm below the base of level six, revealed an homogeneous, sterile alluvium deposit. An anomaly, consisting of burned orange soil in the southwest portion of test unit 2, was designated as Feature 1.

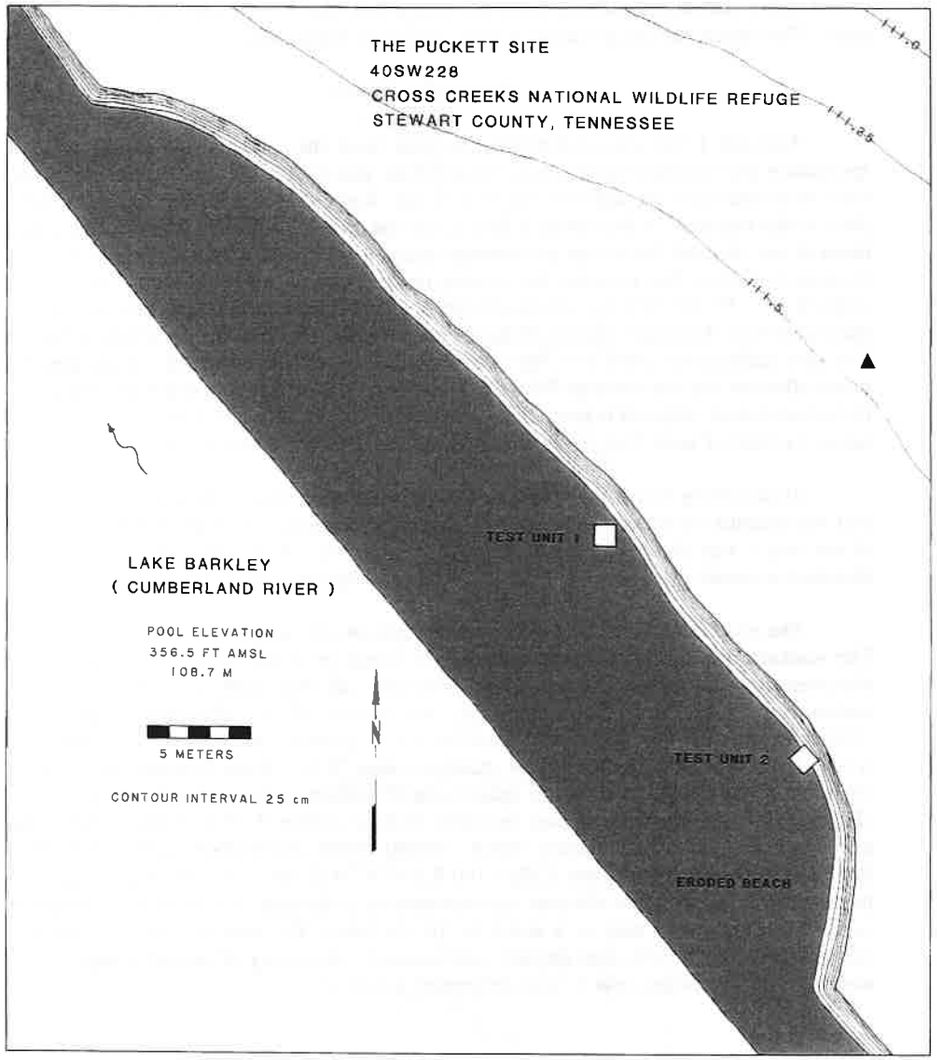

Figure 2. Excavation plan.

Feature 1 was irregularly shaped in plan view with a depth of 6-8 cm. Lithic waste and several flecks of calcined bone (unidentifiable) were recovered from this feature. This may represent a surface fire within an excavated or natural depression.

Recovered Artifacts

A total of 4,777 artifacts was recovered from the excavation of test units 1 and 2 (Table 1). This consisted of 3,394 pieces of Dover chert, 702 pieces of Dover variant, 136 pieces of Fort Payne chert, four pieces of sandstone, and one fragment of limestone. The number and types of artifacts recovered from test unit 2 is more significant due to the extent of intact deposits.

Tertiary flakes (n=1,745), and angular debris (n=1,795), comprise the largest number of lithic material recovered from test unit 2. The small amount of primary (n=11), and secondary flakes (n=17), and the high number of tertiary and angular debris suggest that prepared blanks were transported to this portion of the site for biface/projectile point manufacture. Four expended Kirk Corner-Notched projectile points were recovered from test unit 2, which supports use of the site as a rearmament locality.

Flotation

A two liter soil sample was recovered from each excavation unit and Feature 1 for fine screen and flotation analysis. Each sample was processed through a .589 mm geologic screen into a container. The fine screen residue and the float sample were analyzed for floral and faunal remains.

Only minute particles of charred wood and calcined bone were recovered from the flotation processing. The poor preservation of the fuanal remains is probably due to the high acidic content of this midden deposit.

Summary and Conclusions

Test excavations at the Puckett site revealed an intact, Paleoindian/Early Archaic midden varying from 69-74cm thick. This midden deposit originates at 1.67 meters below datum (1.67-2.36m). The midden consists of a reddish-brown, silt clay containing charcoal flecks, lithic waste flakes, and bifacial implements. No distinct, natural or cultural stratigraphic divisions were discernable within this midden deposit. Two Dalton projectile points were recovered from test unit 1, level five which produced a radiocarbon date of 9,790+160 B.P. Four Kirk Corner-Notched projectile points were recovered from test unit 2 (levels four, five, and six). Wood charcoal recovered from levels five and six were radiocarbon dated at 8,490+180 B.P. and 8,820+180 B.P., respectively.

PROVENIENCE	COLLECTION NUMBER	LEVEL	FEATURE	PROJECTILE POINTS	CORE	BIFACE	PRIMARY FLAKE	PRIMARY Utilized	SECONDARY FLAKE	SECONDARY Utilized	TERTIARY FLAKE	TERTIARY Utilized	ANGULAR DEBRIS	LIMESTONE	SANDSTONE	CHERT TYPE DOVER	CHERT TYPE DOVER VARIANT	CHERT TYPE FORT PAYNE	TOTALS
Test Unit 1	2	1				4			2		136	2	210			270	84		354
Test Unit 1	3	2					1		5		139		89			191	41	2	234
Test Unit 1	4	3								1	56		40			85	12		97
Test Unit 1	5	4				1			4		71	1	78			137	15	3	155
Test Unit 1	9	5		DALTON (2)		3			3		171	1	168			286	60	2	348
Test Unit 2	6	1									4		10			9	4	1	14
Test Unit 2	11	2									8		8			16			16
Test Unit 2	12	3				1					30		17			38	10		48
Test Unit 2	14	4		KIRK			4		2		88		157		2	187	56	9	254
Test Unit 2	16	5		KIRK	2		4		7	1	490		561		2	895	118	53	1068
Test Unit 2	18	6		KIRK (2)		7	3		7		1035		1002	1		1722	268	66	2057
Test Unit 2	20	6	1						1		91		40			98	34		132
TOTALS				6	2	16	12		31	2	2319	4	2380	1	4	3934	702	136	4777

Table 1. 40SW228: Artifact Assemblage.

Dalton projectile points have been successfully dated at various sites in the Southeast (Goodyear 1982; Chapman 1976). Based on Goodyear (1982), the Dalton horizon in the Southeast is suggested to date from about 9,900-10,500 B.P. Radiocarbon dates have been obtained for Dalton points at Graham Cave (Crane and Griffin 1956:667), Arnold Research Cave (Crane and Griffin 1968:69), Stanfield-Worley Bluffshelter (DeJarnette, et al. 1962), Rodgers Shelter (Wood and McMillan 1976), and Olive Branch (Gramly and Funk 1991).

At Graham Cave, a hearth located on the original cave floor was radiocarbon dated at 9,700+500 B.P. (M-1889)(Crane and Griffin 1956:667). Dalton points were found on the original floor but not in direct association with the hearth (Goodyear 1982). At Arnold Research Cave, radiocarbon dates of 8190+400 B.P. (M-1497) and 9130+300 B.P. (M-1497) (Crane and Griffin 1968:69) were obtained from the bottom two levels which contained Dalton, lanceolate, and two other undescribed points (Goodyear 1982). Five radiocarbon dates have been obtained from Zone D at the Stanfield-Worley Bluffshelter (DeJarnette, et al. 1962). Zone D produced dates of 9640+450 B.P. (M-1152), 8920+400 B.P. (M-1153) (Crane and Griffin 1964:9), 9440+400 B.P. (M-1346), 9340+400 B.P. (M-1347), and 9040+400 B.P. (M-1348) (Crane and Griffin 1965:133; Goodyear 1982). Two radiocarbon dates for Dalton were obtained from the Rodgers Shelter site. These dates are 10,530+650 B.P. (ISGS-48) (Coleman 1972:154), and 10,200+330 B.P. (M-2333) (Crane and Griffin 1972a:159; Goodyear 1982). At Olive Branch, Dalton points were recovered from S50E6/E8 which was radiocarbon dated at 9115+100 B.P. (Beta-32366, ETH-5671) (Gramly and Funk 1991). A second date of 9975+125 B.P. (AA-4805) was obtained from what was termed the "Quad Zone". This date and the projectile points recovered from this zone correspond more closely to the Dalton occupation of the site.

Goodyear (1982) suggests that the radiocarbon dates published from Graham Cave, Arnold Research Cave, and Stanfield-Worley can be challenged on the basis of their association with Dalton materials. The date obtained from 40SW228, and the dates from Olive Branch (second date), and Rodgers Shelter, should represent Dalton's chronological position in the Southeast.

There are relatively few radiocarbon dates for Kirk Corner-Notched projectile points in the Southeast. Dates have been obtained from Early Archaic sites in Tennessee, Kentucky, Alabama, and West Virginia.

In eastern Tennessee, Chapman (1976) has compiled numerous radiocarbon dates for Kirk Corner-Notched points from the Icehouse Bottom (40MR23), Patrick (40MR40), and Rose Island (40MR44) sites. At Icehouse Bottom, Kirk Corner-Notched points were found in Stratum O, L, and Q, which yielded dates of 9435+270 B.P., 9350+215 B.P., and 9175+240 B.P., respectively. At the Patrick site, a Kirk Corner-Notched point was found within Stratum 16 which was dated at 9410+290 B.P. Stratum VIII at the Rose Island site yielded Kirk cluster points which dated 9330+250 B.P. (Chapman 1976:4-5).

In Kentucky, Kirk projectile points have been recovered from dateable context at the Lawrence (15TR33), and Cloudsplitter Rockshelter (15MF36) sites. At the Lawrence site, Kirk-like points were recovered from midden context which was radiocarbon dated at 5375+125 B.C. (Mocas 1977; Jefferies 1990). At Cloudsplitter Rockshelter, two Kirk-like corner-notched points along with a LeCroy point were recovered from Stratum I which was radiocarbon dated at 8200+225 B.P. (Cowan et al. 1981).

In Alabama, Kirk Corner-Notched projectile points were recovered from level G at Russell Cave which was radiocarbon dated at 5615+250 B.C. (Griffin 1974; Futato 1983).

In West Virginia, at the St. Albans site (46KA27), Kirk Corner-Notched points were recovered from Zone 16 and Zone 18 which produced radiocarbon dates of 6850+320 B.C. and 6900+320 B.C., respectively (Broyles 1966; Justice 1987).

The radiocarbon dates for Kirk Corner-Notched at the Puckett site represent the first radiometric determinations for Kirk in Middle Tennessee. These dates, along with the determinations from St. Albans and Cloudsplitter Rockshelter are comparable to the radiocarbon dates obtained from the Little Tennessee Valley in East Tennessee. The dates from the Lawrence site and Russell Cave may represent the later end of the Kirk tradition. Further research is needed to confirm the chronological range for Kirk Corner-Notched points in the middle and west Tennessee regions.

A total of 4,777 artifacts was recovered from the excavation of two one meter square test units. The high number of tertiary flakes and angular debris, coupled with the expended projectile points from test unit 1 (n=2), and test unit 2 (n=4), suggest that this portion of the site functioned as a rearmament locality.

Although Clovis and Beaver Lake projectile points were not recovered from these test excavations, they have been surface collected from this locale in the past. These earlier occupations may be preserved at 40SW228 well beneath the deposits identified by the one meter square test units.

The Puckett site represents one of the most extensive and important Paleoindian/Early Archaic sites in Middle Tennessee. Nomination of this site on the National Register is currently being pursued. Additional research is needed to determine: (1) the exact size and extent of the intact midden, (2) whether or not the site is single or multifunctional, and (3) the complete occupation sequence for the site area.

Acknowledgements

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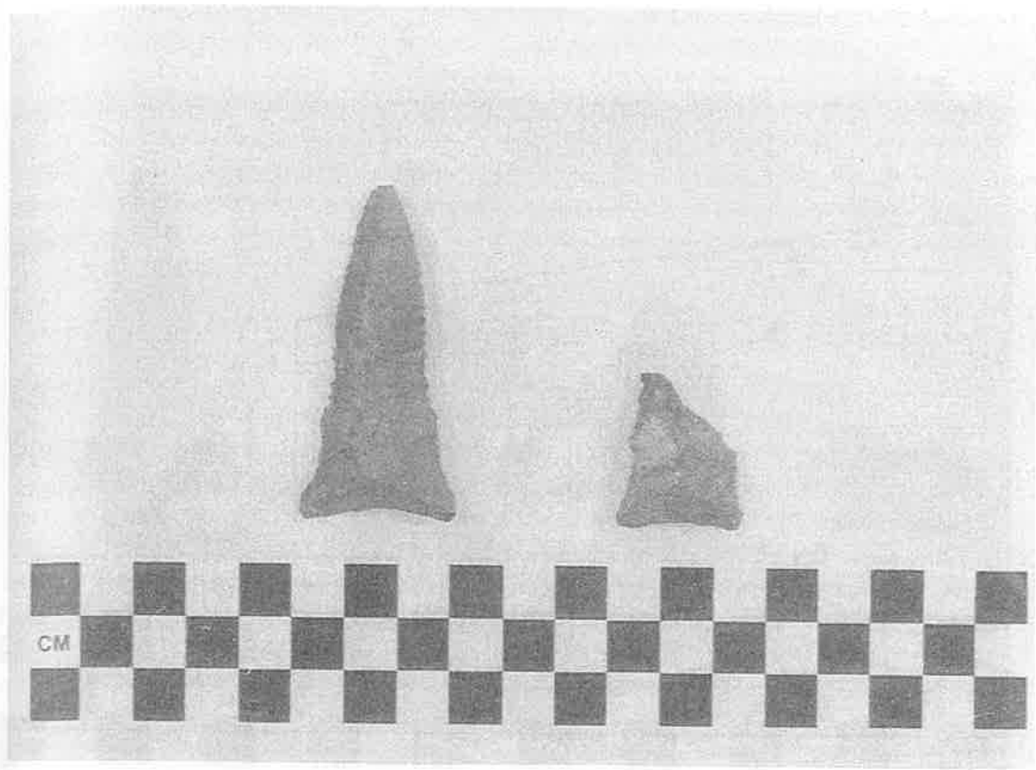

Figure 3. Dalton Projectile Points (T.U. 1, level 5).

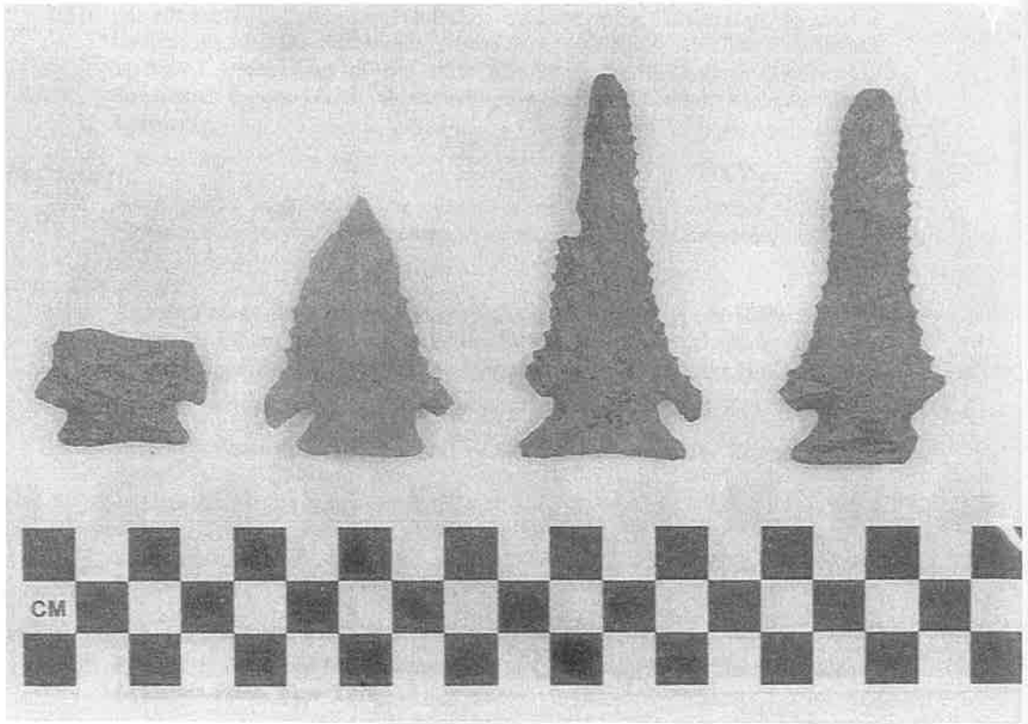

Figure 4. Kirk Corner-Notched projectile points (T.U. 2).

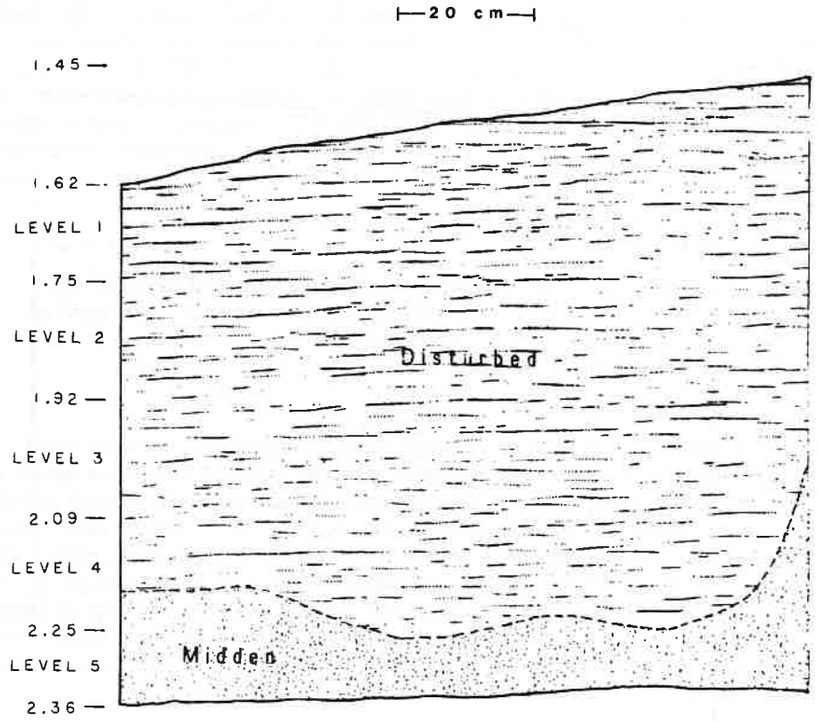

Figure 5. Test Unit 1, North Profile.

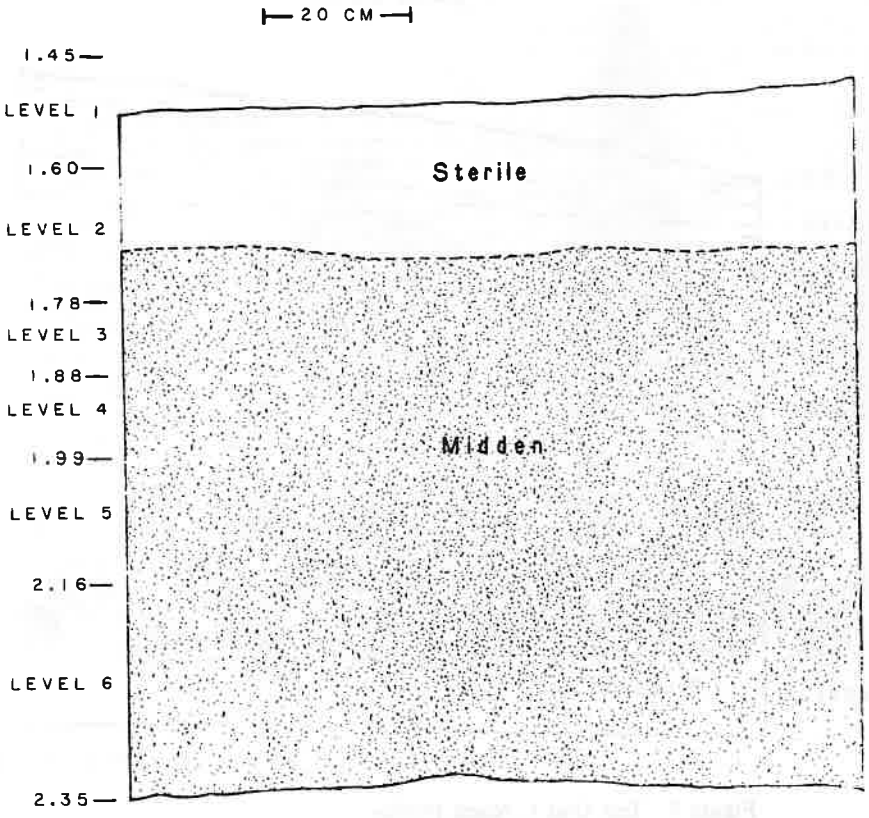

Figure 6. Test Unit 2, North Profile.