

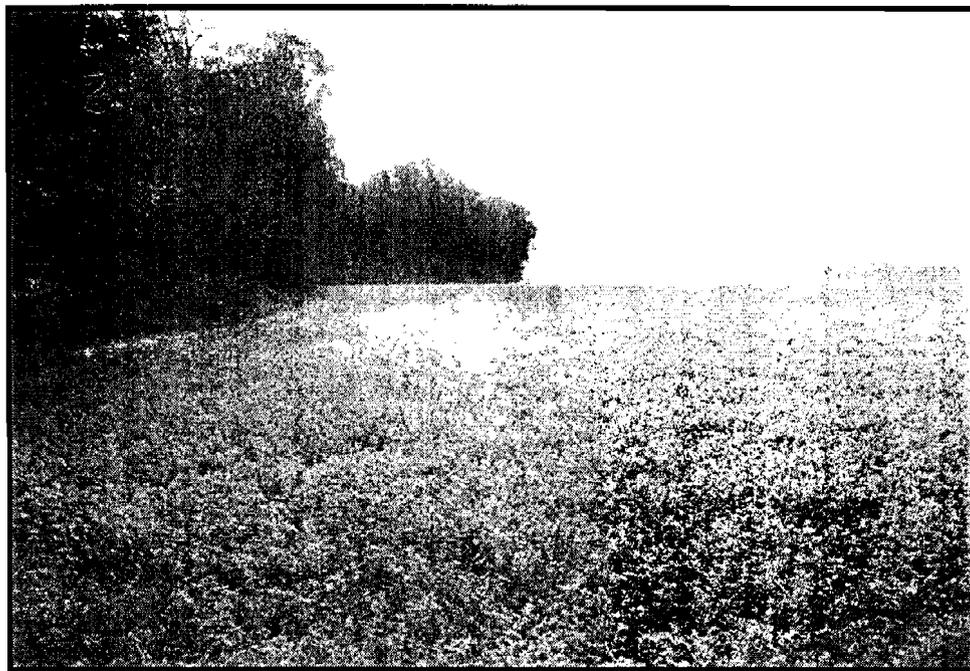
7.0 RESULTS OF SURVEY

The project area, centered on Bridge 2-210A, marks the intersection of Shady Bridge Road and Culbreth Marsh Ditch. Both stream and road make broad "S" turns at the intersection point (Plate 7-1). An elevated stream terrace forms the southern margin of Culbreth Marsh Ditch, with approximately 5 m of relief between terrace and stream. Lower wetlands are located to the north. Shady Bridge Road bisects both terrace and wetlands on its north-south route between Mud Mill Road and Mahan Corner Road (Plate 7-2). The roadbed was graded up to 2 m below the ground surface of the terrace as it approaches Bridge 2-210A. At the time of the present field investigations, the stream margins were wooded, with stands of mature hardwoods covering portions of both the stream terrace to the south and the wetlands to the north. The southern portion of the LOC also contained an active agricultural field on the east side of the road (Plate 7-3) and planted white pines to the west. Standing water covered the majority of the LOC on either side of the roadbed to the north of Bridge 2-210A.

The archaeological field investigations consisted of the excavation of 38 STPs and four 1 by 1 meter test units within the LOC. In total, 279 artifacts were recovered from subsurface contexts, including 259 prehistoric artifacts, 17 historical artifacts, and three unidentifiable bone fragments (Table 7-1). Historical artifacts consisted of clear and amber machine-made bottle glass, 1 unidentified nail fragment, and one fragment of unidentified burned material. All of the historical artifacts were recovered from the plow zone or surface horizon, with the exception of one glass fragment that was recovered just below the plow zone in STP C-3. The artifact types and near surface contexts suggest recent and ephemeral historical activity within the project LOC.



**Plate 7-2. Bridge 2-210A, Facing South from Bridge:
Area A to Right, Area C to Left.**



**Plate 7-3. Bridge 2-210A, Plowed Field in Southern Portion of Area C,
Facing Southeast**

Table 7-1. Artifacts Recovered at Bridge 2-210A, Listed by Type and Excavation.

Artifact Type	STP	Unit	Total
Prehistoric			
<i>thermally altered stone</i>	60	73	133
<i>flake</i>	40	52	92
<i>chip</i>	2	12	14
<i>ceramic</i>	3	17	20
Historical			
	1	16	17
Faunal			
	1	2	3
Total	107	172	279

7.1 SHOVEL TESTING

Thirty-six of 38 STPs were excavated within Areas A (n=13) and C (n=23), located on the stream terrace bisected by Shady Bridge Road. Area C contained both plowed (planted in alfalfa at the time of investigation) and unplowed (wooded) portions (Figure 7-1). Soils within Areas A and C consisted of loamy sand, with organic materials decreasing with depth (soil color sequence of 10YR3/2-4/4, 10YR5/6-6/4, 10YR6/4-7.5YR5/6) and compactness increasing with depth, reflecting an A/Ap-E-B horizon sequence (Figure 7-2). Darker colored horizontal lamellae were present within the B horizon at 50-100 cm below ground surface.

The plow zone (Ap) ranged in thickness from 25 to 30 cm. The wooded areas were dense and contained heavy underbrush and mature hardwoods (18-24 inches in diameter). Based on the sizes of the trees, this portion of the LOC had likely been wooded for over 50 years. Tree roots were encountered throughout the profile, and in some cases, caused the placement of excavations to be adjusted in order to avoid dense or large roots. While there was no direct evidence that the wooded portion of the LOC have ever been plowed, repeated and extensive tree growth and soil development could have masked the presence of an early plow zone.

Areas B and D, located north of Bridge 2-210A, consisted of low wetlands and marshy areas with standing water. Soils in these areas included fill utilized to raise the existing roadbed approximately 1 m above the wetlands. A single STP was excavated within each of Areas B and D to verify that the fill was situated directly over wetland soils, thus indicating little or no potential for the presence of cultural deposits (Figure 6-1). The immediate vicinity (10-20 meters) to both approaches to Bridge 2-210A was visibly disturbed with drainage features, utility lines, and an undulating ground surface, the latter possibly resulting from the channelization of Culbreth March Ditch. Due to these obvious disturbances, no STPs were excavated in these areas.

In total, 105 prehistoric artifacts, 1 historical artifact, and 1 faunal fragment were recovered from 22 positive STPs excavated within Areas A and C. The prehistoric artifacts consisted primarily of thermally altered stone (TAS) fragments and lithic debitage. In addition, three quartz-tempered ceramic sherds (consistent with descriptions of the Early Woodland Wolfe Neck ware) were recovered, from STPs C-8, C-16, and C-23 (Figure 7-1). The prehistoric artifacts were concentrated within the wooded area on the highest portion of the landform

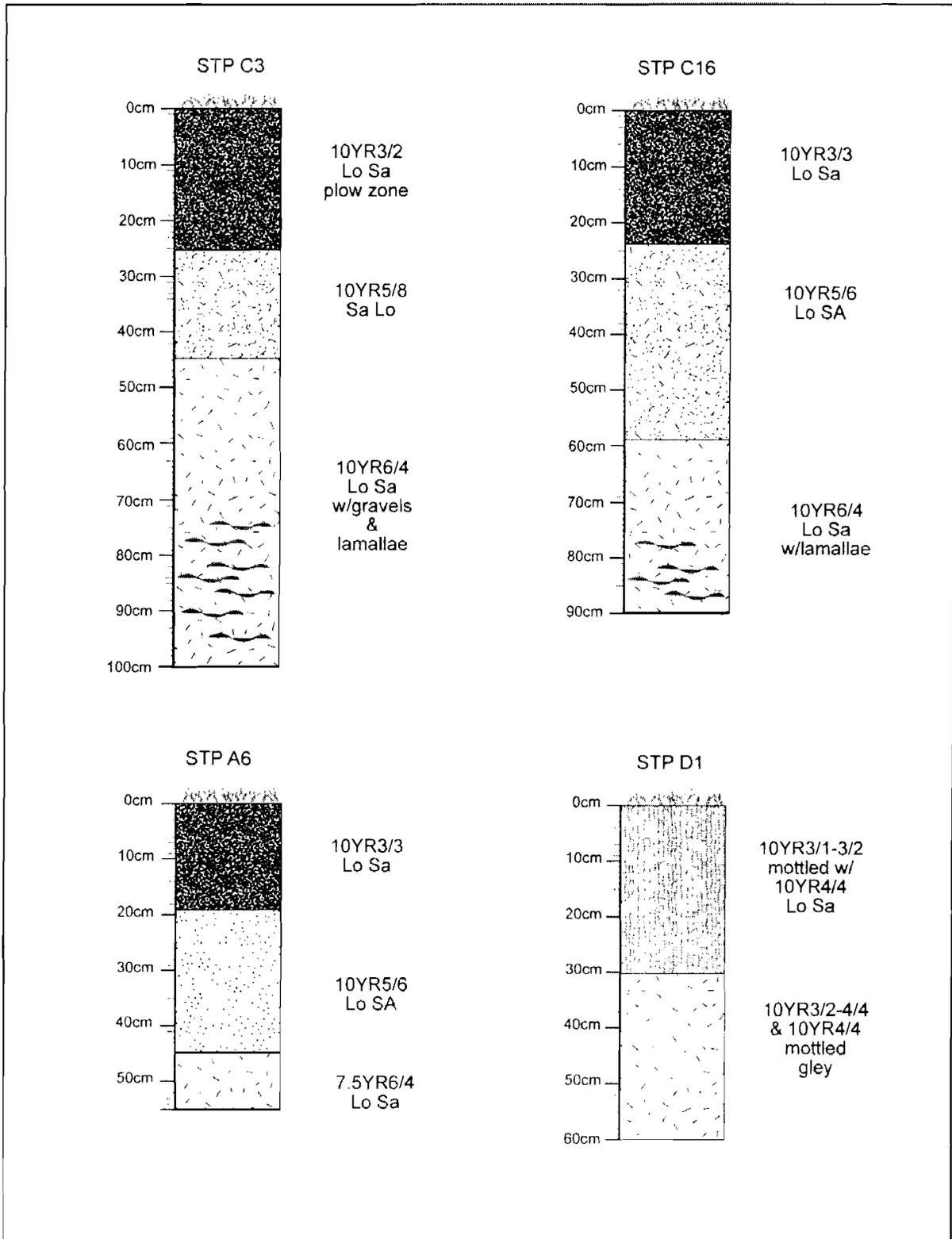


Figure 7-2. Selected Shovel Test Profiles, Areas A, C, and D.

within the LOC (Figure 7-3). The artifact concentration was bisected by Shady Bridge Road, which had removed an unknown portion of the site. The majority of the artifacts that remained (89 percent) were found in Area C, east of the road, while a small number were recovered from Area A, the narrow strip west of the road. Artifact density appeared greatest near the center of Area C, as depicted by the results of a cluster analysis of shovel test data shown in Figure 7-3. Artifact frequency decreased to the east and north: the distribution was interrupted by a borrow pit to the east and by road disturbances and Culbreth Marsh Ditch to the north. The existing road and the western edge of the LOC bounded the distribution to the west, although shovel test data from Area A, west of the road, suggested a decrease in artifact frequency. To the south and southeast, shovel testing conducted in the plowed field indicated that the distribution also decreased. Thus, the artifact distribution, as it occurred within the LOC, measured approximately 55 m north-to-south (grid N95 to N150) and 30 m east-to-west (grid E480 to E510).

In terms of vertical artifact provenience, artifacts recovered from the STPs in both Area A and Area C were evenly split between Stratum A (including both Ao and Ap horizons) and Stratum B (the E horizon). In total, 51 artifacts were recovered from the E horizon, at depths ranging from 20 to 50 cm below ground surface.

7.2 TEST UNITS

Four 1-m² test units were excavated in Area C to assess stratigraphic integrity within the wooded and plowed portions of the LOC and to further examine artifact concentrations discovered through shovel testing (Figure 7-4). Locations were selected to sample the physiographic variation within the project area and to sample areas of artifact concentration. Three test units were placed within the wooded area and the fourth was placed within the plowed portion of the LOC. In total, 154 prehistoric artifacts, 16 historical artifacts, and 2 fragments of bone were recovered during test unit excavation.

Test Unit N102/E500 was excavated in the plowed field in the southern portion of the project limits (Figure 7-5, Plate 7-4). North-south running plow scars were visible at the base of the plow zone. Eight prehistoric artifacts and 15 historical artifacts (mostly modern bottle glass) were recovered from the plow zone (25-30 cm in depth) (Table 7-2). Two small flakes (>2 cm) and a TAS fragment (1.4 grams [g]) were recovered from below the plow zone. Subsoils in this unit were sandy and contained small rounded pebbles, indicating a rise in the underlying parent material or fluvial disturbance.

Table 7-2. Vertical Distribution of Artifacts in Test Unit N102/E500.

<i>Stratum</i>	<i>Level</i>	<i>Horizon</i>	<i>Bone</i>	<i>Flaking Debris</i>	<i>TAS</i>	<i>Historical</i>	<i>Total</i>
A	1	Ap	1	5	3	15	24
B	1	E	--	--	1	--	1
B	2	E	--	1	--	--	1
Total by Type			1	6	4	15	26

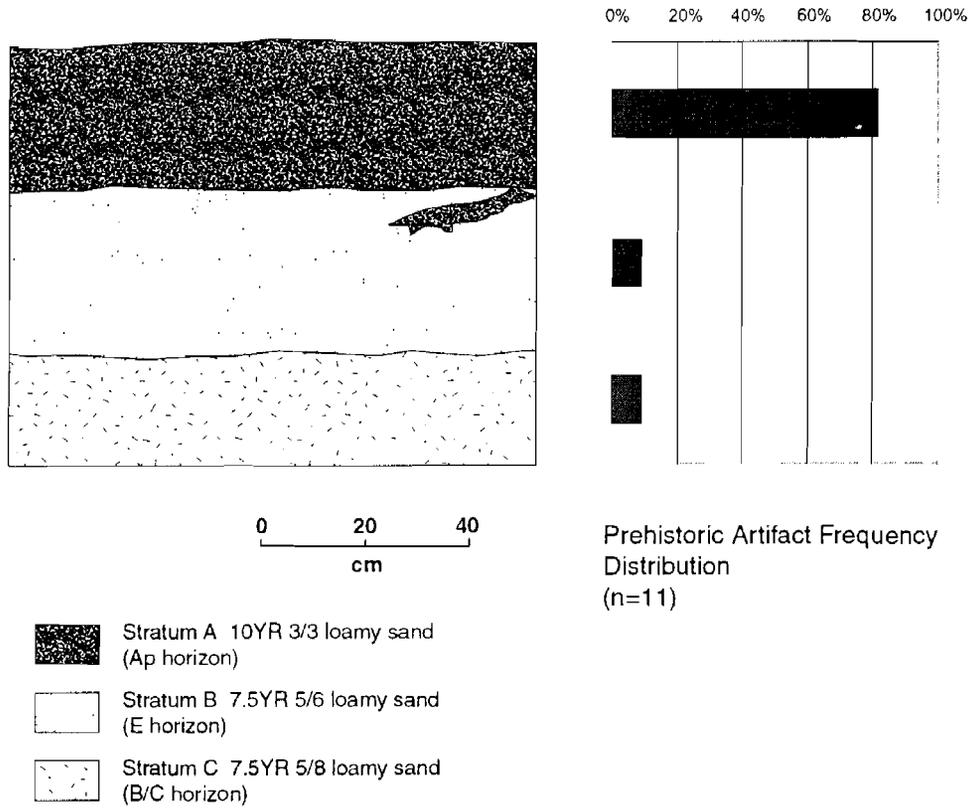


Figure 7-5. N102/E500, Profile Section (North Wall) and Prehistoric Artifact Frequency Distribution with Depth.

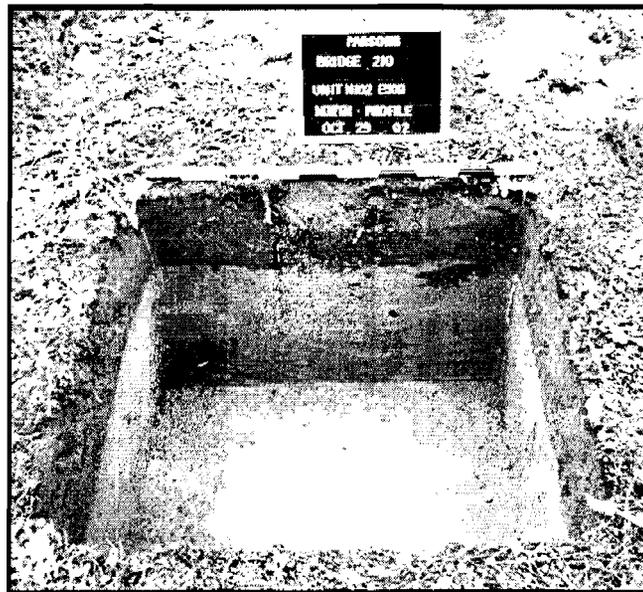


Plate 7-4. N102/E500, Profile Section, North Wall.

Stratigraphy among the three test units within the wooded portion of Area C (N117/E505.5, N123/E500, and N123/E504) was sufficiently alike that the units can be described together (Figures 7-6 and Plate 7-5, Figure 7-7 and Plate 7-6, Figure 7-8 and Plate 7-7). A 20-cm thick, organic-rich surface layer (A horizon) overlay 30 to 40 cm of leached E horizon sediment, which in turn covered a sandy clay loam B horizon. The upper two strata contained many tree roots and the remnant stains of decayed roots. In contrast to the plowed field, 77 percent of the artifacts recovered from the test units in the wooded portion of Area C were from below the A horizon. These artifacts consisted primarily of flaking debris and small TAS fragments (mean weight 16.3 g) recovered throughout the 30 to 40 cm of E horizon soils. Fourteen artifacts were recovered from the E/B horizon transition and B horizon. The vertical distribution of artifact types and materials was similar in the profiles of each test unit (Tables 7-3, 7-4, and 7-5). Flaking debris was evenly divided between jasper and quartz, while a small number of chert, quartzite, and rhyolite specimens were also present. The majority of the TAS fragments consisted of quartz (48 percent), followed in occurrence by quartzite (33 percent), and jasper (16 percent). Based on the size and cortical attributes of the recovered artifacts, both the TAS fragments and flaking debris appeared to have been derived from pebbles and small cobbles. Little natural gravel or stone was encountered within the excavated test units, suggesting that while the lithic raw material used by the site occupants was locally derived, it was probably obtained at some distance from the site.

Table 7-3. Vertical Distribution of Artifacts in Test Unit N117/E505.5.

<i>Stratum</i>	<i>Level</i>	<i>Horizon</i>	<i>Bone</i>	<i>Flaking Debris</i>	<i>TAS</i>	<i>Ceramic</i>	<i>Total</i>
A	1	Ao/Ae	--	--	11	--	11
B	1	E	--	1	16	3	20
B	2	E	--	3	11	--	14
B	3	E	--	3	9	--	12
B	4	E	1	4	--	--	5
B	5	E/B	--	4	1	--	5
C	1	B	--	--	1	--	1
Total by Type			1	15	49	3	68

Table 7-4. Vertical Distribution of Artifacts in Test Unit N123/E500.

<i>Stratum</i>	<i>Level</i>	<i>Horizon</i>	<i>Flaking Debris</i>	<i>TAS</i>	<i>Ceramic</i>	<i>Total</i>
A	1	Ao/Ae	3	8	7	18
B	1	E	2	4	6	12
B	2	E	6	2	--	8
B	3	E	1	--	--	1
B	4	E/B	1	1	--	2
Total by Type			13	15	13	41

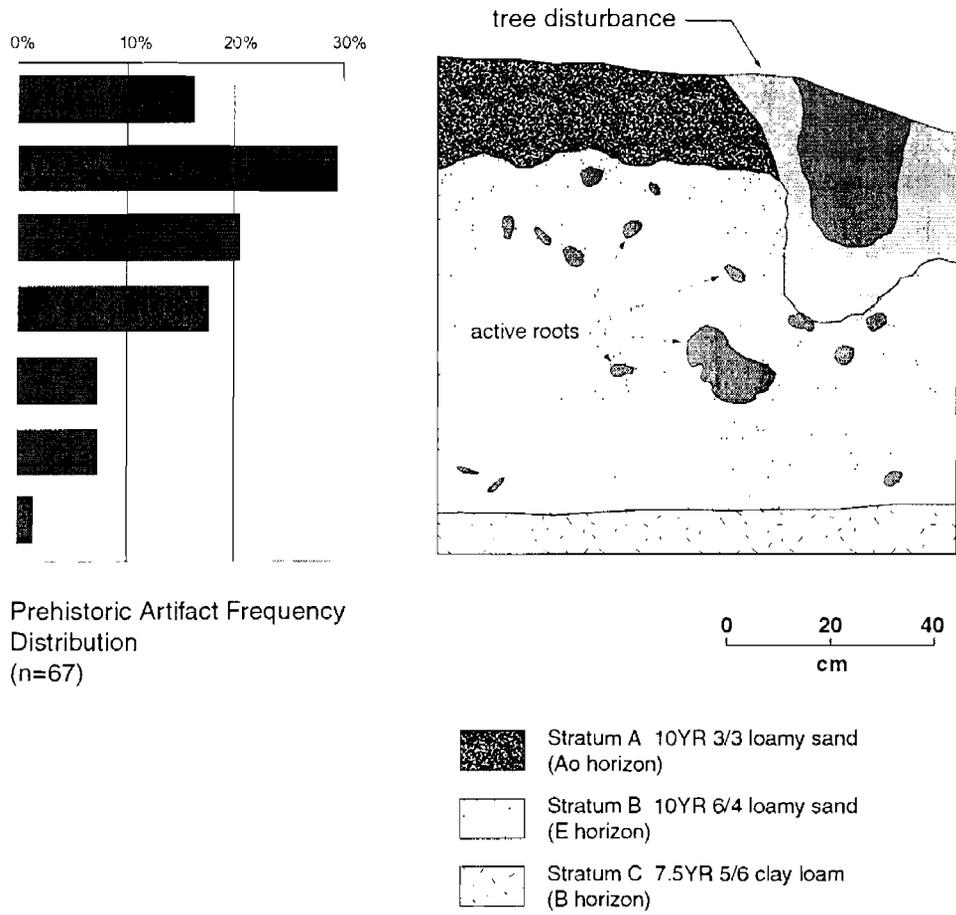


Figure 7-6. N117/E505.5, Profile Section (North Wall) and Prehistoric Artifact Frequency Distribution with Depth.

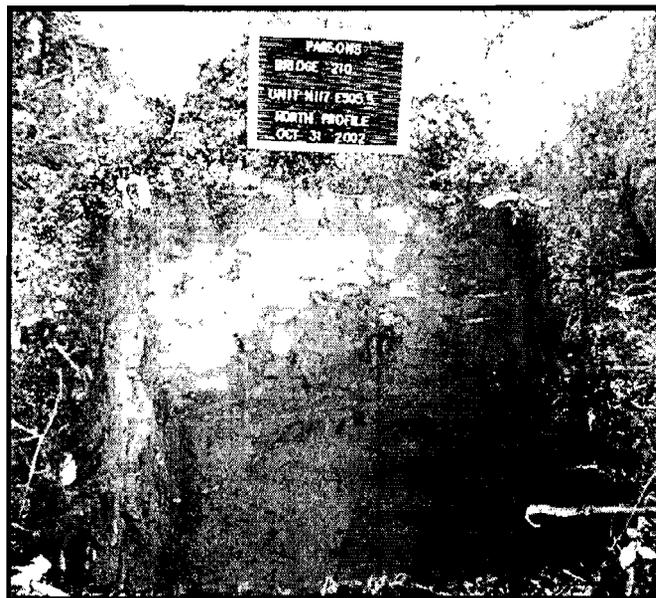
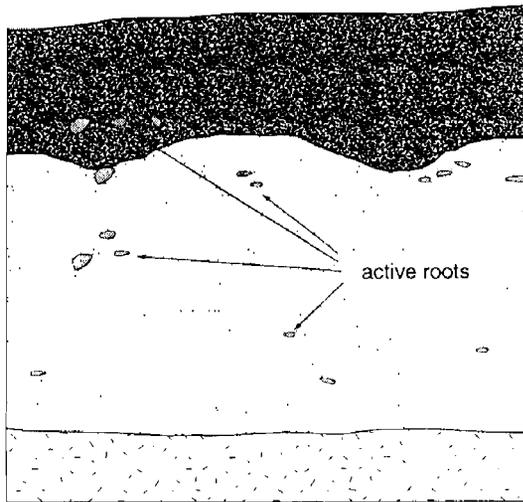
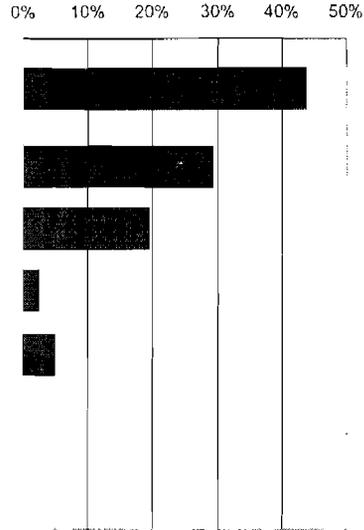


Plate 7-5. N117/E505.5, Profile Section, North Wall.



0 20 40
cm



Prehistoric Artifact Frequency Distribution (n=41)

-  Stratum A 10YR 3/3 loamy sand (Ao horizon)
-  Stratum B 10YR 6/4 loamy sand (E horizon)
-  Stratum C 7.5YR 5/6 clay loam (B horizon)

Figure 7-7. N123/E500, Profile Section (East Wall) and Prehistoric Artifact Frequency Distribution with Depth.

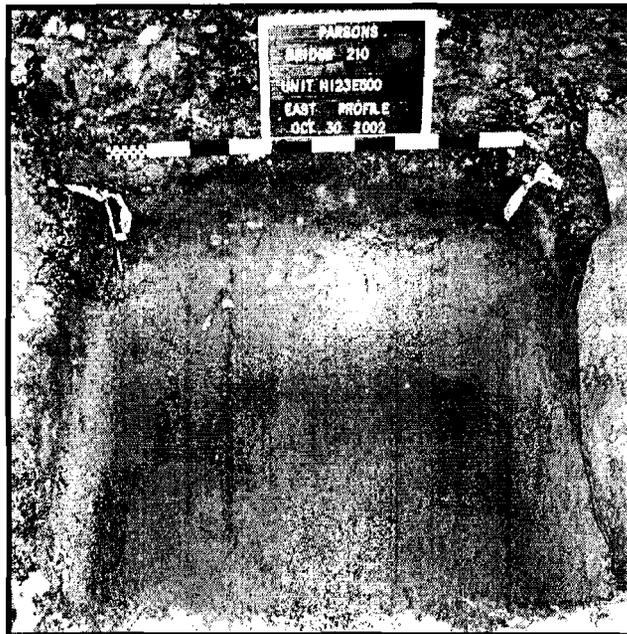
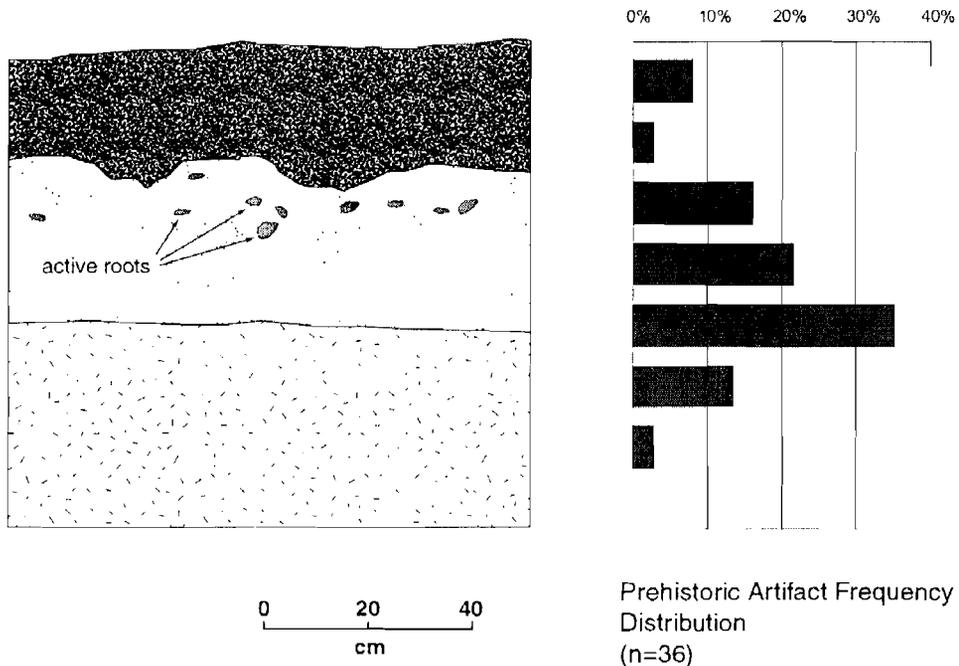


Plate 7-6. N123/E500, Profile Section, East Wall.



-  Stratum A 10YR 3/3 loamy sand (Ao horizon)
-  Stratum B 10YR 6/4 loamy sand (E horizon)
-  Stratum C 10YR 5/6 clay loam (B horizon)

Figure 7-8. N123/E504, Profile Section (East Wall) and Prehistoric Artifact Frequency Distribution with Depth.

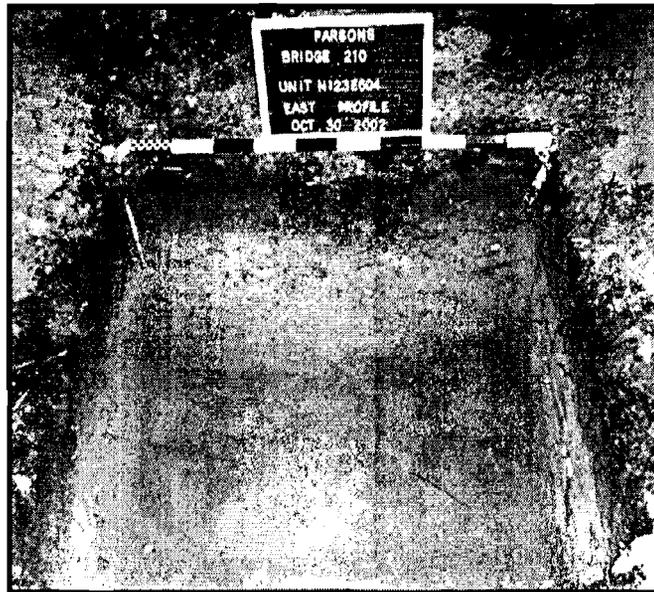


Plate 7-7. N123/E504, Profile Section, East Wall.

Table 7-5. Vertical Distribution of Artifacts in Test Unit N123/E504.

<i>Stratum</i>	<i>Level</i>	<i>Horizon</i>	<i>Bottle Glass</i>	<i>Flaking Debris</i>	<i>Ceramic Pipe</i>	<i>TAS</i>	<i>Total</i>
A	1	Ao	1	1	1	--	3
B	1	Ae	--	1	--	--	1
B	2	E	--	4	--	2	6
B	3	E	--	5	--	3	8
B	4	E	--	11	--	2	13
B	5	E/B	--	5	--	--	5
C	1	B	--	1	--	--	1
Total by Type			1	28	1	7	37

Diagnostic artifacts from the units consisted of 16 ceramic sherds that were quartz tempered and were consistent with descriptions of Wolfe Neck ware. Wolfe Neck vessels were typically coil constructed, conoidal in form, with direct rims and flattened or rounded rims, had a paste tempered with crushed-rock (usually quartz), and exhibited either cord-marked or net-impressed exteriors (Griffith 1982; Custer 1989). Similar wares in the Middle Atlantic region, have been referred to as Accokeek, Elk Island, and Vinette I. At the type site in Sussex County, Griffith and Artusy (1977) reported associated radiocarbon dates between 505 and 380 B.C., although the range is generally considered to have been 700 to 400 B.C. (Griffith 1982).

The sherds were recovered from the base of the A horizon and the top of the E horizon in three STPs—one each in C-8, C-16, and C-23—and two test units—N123/E500 (n=13) and N117/E505.5 (n=3). Two rim sherds, recovered from test unit N123/E500, mended (Plate 7-8). The cord marking on all of the sherds exhibited a final S-twist.

A prehistoric tobacco pipe fragment was recovered from the A horizon of test unit N123/E504 (Plate 7-9). The pipe specimen consisted of the bottom quarter of a clay bowl. The paste did not appear to contain added temper; medium-to-fine sand that comprised between 20 to 30 percent of the paste appeared to be a natural inclusion. The bore diameter of the pipe measured 5 mm, and the stem diameter ranged from 17 to 20 mm.

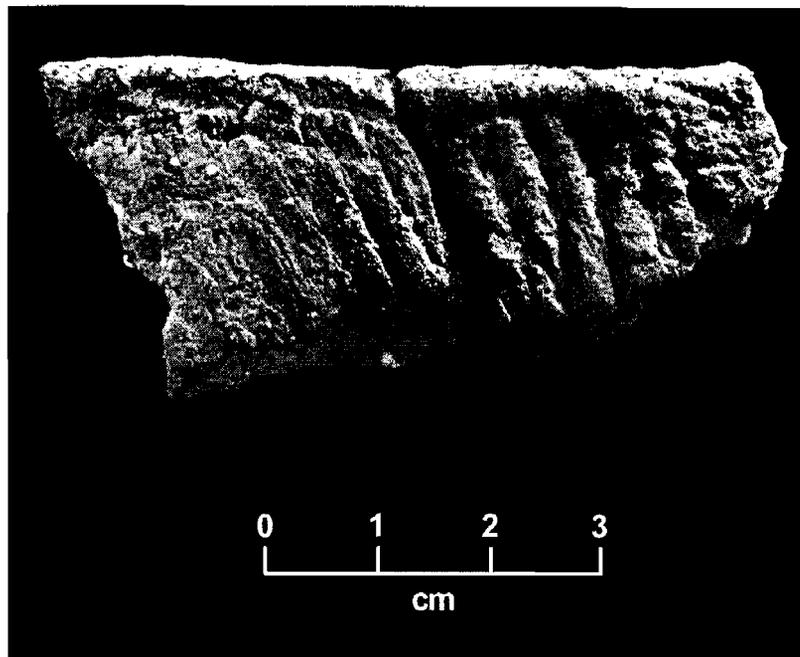


Plate 7-8. Mended Rim Sherds, Wolfe Neck Ware, N123/E500.

Although only a portion of the stem was present, the form of the pipe appeared to have been tubular. Patterned variation in the diameter measurements indicated that the pipe was not a straight tube pipe, but that it expanded at slightly at one end.

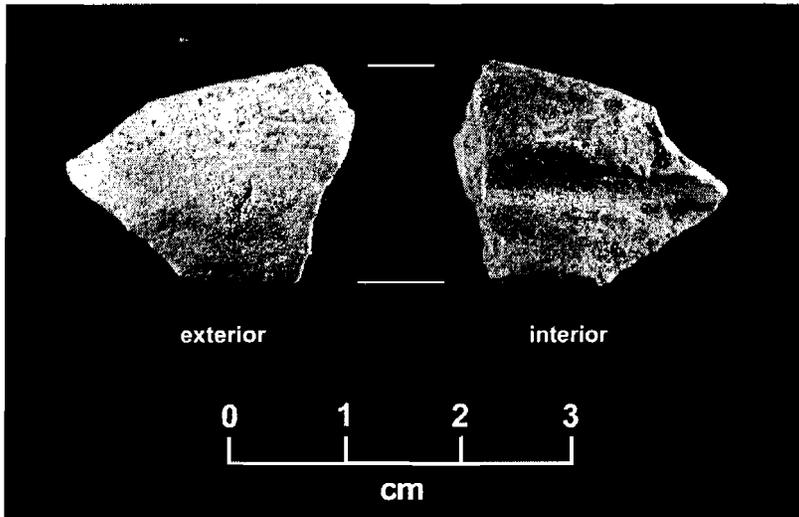


Plate 7-9. Ceramic Pipe Fragment.

Clay pipes are not precisely dated in the Delmarva region. Clay and stone pipes, which may have been used to smoke various herbs including tobacco, have been found in the eastern United States in numerous contexts from the Early Woodland through the historic period. Tobacco itself has not been reported from many Early or Middle Woodland sites in the eastern region; however, several carbonized tobacco seeds were radiocarbon dated to ca. A.D. 150 at the Smiling Dan site, in

Illinois, confirming at least a Middle Woodland date for its presence (Haberman 1984). The earliest pipe forms were the “cigar-shaped” tubular types made of clay or stone, and by ca. 800-600 B.C. these forms were widespread (Turnbaugh 1975). Examples have been found in association with Early Woodland Vinette ceramics at numerous sites in the Northeast (Ritchie 1969), as well as with Early Woodland Accokeek ceramics in the Middle Atlantic (Stephenson and Ferguson 1963). Therefore, the current fragment could be contemporary with the Wolfe Neck ceramic vessel sherds recovered at this site (ca. 700-400 B.C.).