40HS200: THE NUCKOLLS EXTENSION SITE

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Abstract

An assemblage of Paleoindian projectile points and unifacial tools from a site on Kentucky Lake is analyzed. The material consists of 296 projectile points and 155 unifacial tools. A large number of these projectile points are basal fragments, suggesting a rearmament locality.

Introduction

The Nuckolls Extension site (40HS200) is a multicomponent occupation, located on a ridge approximately three quarters of a mile from the Tennessee River channel in Humphreys County, Tennessee. The Nuckolls site, 40HS60, (Nuckolls 1958; Lewis and Kneberg 1958) is approximately 300 yards to the north along the same ridge remnant that is now inundated by Kentucky Lake, and is exposed only during the lowest level of winter pool.

Excavations at the Nuckolls site were conducted in 1958 (Lewis and Kneberg 1958) and in 1961 (McNutt and Graham 1965). The 1958 investigations were initiated to determine if Paleoindian materials reported by Nuckolls (1958) were eroding from an intact cultural component. This excavation consisted of a three foot wide trench dug to the depth of forty-four inches, which was approximately six inches below the beach level. An intact cultural zone was encountered within the upper eighteen inches, with the remaining twenty-six inches consisting of sterile alluvium. Lewis and Kneberg concluded that the excavation was performed on the periphery of the site and that the main habitation area had been destroyed by lake action.

In 1961, McNutt and Fisher (McNutt and Graham 1965) hypothesized that the 1958 excavations at the Nuckolls site may not have been deep enough to encounter the Paleoindian cultural level. The 1961 excavations consisted of a vertical continuation of Lewis and Kneberg's trench ca. one foot below the water level, and numerous deep tests performed with a post hole digger. This work did not reveal a cultural zone below the upper eighteen inch cultural zone. McNutt and Fisher concluded that an intact Paleoindian component did not exist at the Nuckolls site, and that the Paleoindian material may have eroded from its original context before occupation of the site during the Archaic period.

The Nuckolls Extension site was recorded by the Memphis State Anthropological Research Center in 1965 (McNutt and Graham 1965), during an investigation of preceramic sites in the Kentucky Lake region. Investigations of this site in 1965 were hindered by high pool levels which did not allow formal excavations.

A large number of Paleoindian projectile points (296) and unifacial tools (155) have been collected from 40HS200 by Richard Anderson, a member of the

Dickson County Archaeological Society. Mr. Anderson has also collected numerous Archaic projectile points from this locale, including Kirk Corner-Notched (19), Kirk Serrated (35), Eva (41), Lost Lake (9), Plevna (2), LeCroy (2), Morrow Mountain (2), Big Sandy (168), Benton (2), Big Slough (3), and numerous Late Archaic stemmed types. Mr. Anderson has generously allowed the Division of Archaeology to analyze the Paleoindian assemblage from 40HS200.

Artifact Assemblage

[All measurements were obtained by digital caliper at the maximum point of each attribute]

Clovis (Cambron and Hulse 1975:25) (Figure 1)

Sample size: 8

The Clovis points recovered from this site display single flutes on the dorsal (8) and ventral (5) face, with a slightly incurvate base. Three specimens were fluted on the dorsal face only, and one specimen exhibited two flutes on the ventral face. Clovis projectile points typify the Early Paleoindian period ca. 12,000 to 11,000 B.P.

Measurements: Length: (3 complete) 61.59-95.50mm, mean 57.82mm, (5 basal fragments) 28.78-54.98mm, mean 44.33mm; Basal Depth: 2.10-8.06mm, mean 3.72mm; Basal Width: 19.70-35.11mm, mean 26.18mm; Body Width: (7) 20.54-38.38mm, mean 24.54mm; Thickness: 3.14-8.80mm, mean 6.14mm; Flute: obverse; 9.38-58.67mm, mean 28.77mm, reverse; (5) 13.91-37.43mm, mean 25.20mm; Lateral Grinding: right; 13.46-35.17mm, mean 22.33mm, left; 15.48-35.06mm, mean 24.46mm

Chert Type: Dover-7; Fort Payne-1

Clovis, Unfluted (Cambron and Hulse 1975:27) (Figure 1)

Sample size: 3

The attributes displayed in the hafting area of these points are identical to their fluted counterpart, with the exception of the basal thinning flutes. An Early/Middle Paleoindian association is suggested for this type, ca. 11,500 to 10,500 B.P.

Measurements: Length: (1 complete) 82.35mm, (2 basal fragments) mean 35.94mm; Basal Depth: 1.38-4.38mm, mean 3.01mm; Basal Width: 22.65-25.77mm, mean 23.99mm; Thickness: (2) mean 7.06mm; Lateral Grinding: right; 10.20-39.97mm, mean 21.67mm; left; 14.36-38.92mm, mean 22.59mm

Chert Type: Dover

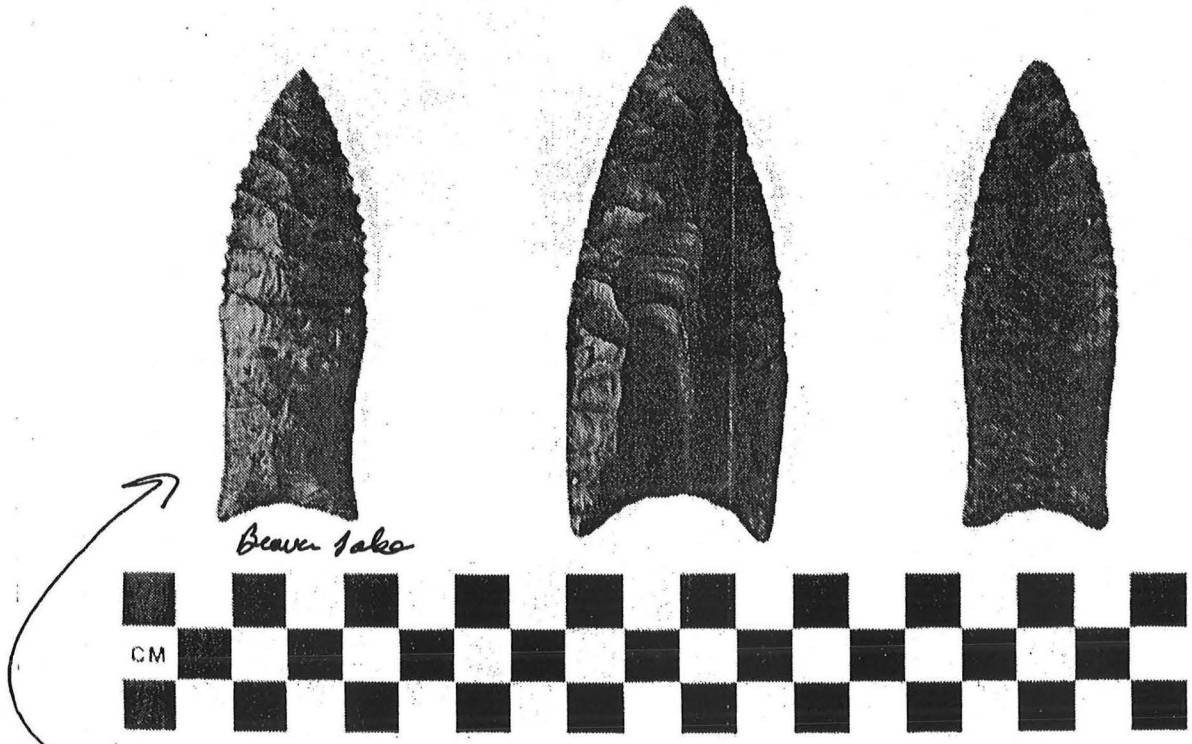

Figure 1. ~~Unfluted Clovis~~ Beaver Lake, Clovis
(wrong PPK photo cd)

Clovis Preform (Figure 2)

Sample size: 14

This category consists of biface preforms that display termination during the fluting process, which Callahan (1979:36) describes as stage six. Twelve of these preforms exhibit a single flute with an unfinished basal edge. Two specimens have hinge fracture terminations with a striking nipple remnant. Two broken preforms display a striking nipple only, indicating an overshot termination.

Measurements: Length: 29.99-82.80mm, mean 49.95mm; Basal Depth: (1) 2.91mm; Basal Width: 22.62-51.46mm, mean 37.75mm; Body Width: 29.56-58.38mm, mean 42.51mm; Thickness: 7.22-12.18mm, mean 9.35mm; Flute: obverse; (12) 19.31-39.31mm, mean 36.71mm; Lateral Grinding: right; (5) 19.87-30.67mm, mean 24.38mm; left; (3) 19.06-27.26mm, mean 23.22mm

Chert Type: Dover

Cumberland (Cambron and Hulse 1975:36) (Figure 3)

Sample size: 1

This projectile point is triangular in cross-section, displays a heavily ground, constricted hafting area, and exhibits a single flute on the dorsal side. Cumberland projectile points are associated with the Middle Paleoindian period, ca. 11,000 to 10,500 B.P. (Anderson 1989).

Measurements: Length: 80.48mm; Basal Depth: 2.39mm; Basal Width: --; Thickness: **; Flute: obverse; 60.05mm; Lateral Grinding: 39.97mm

Chert Type: Dover

Cumberland Preform

Sample size: 2

These preforms are triangular in cross-section, display a striking nipple, and have a single flute on the dorsal face. One preform was snapped by fluting the dorsal face (stage 6), while the other was snapped while attempting to flute the ventral face (stage 8) (Callahan 1979:36).

Measurements: Length: mean 26.43mm; Basal Depth: --; Basal Width: (1) 26.36mm; Thickness: mean 6.15mm; Flute: obverse; mean 23.31mm; Lateral Grinding (1) 15.36mm

Chert Type: Dover

Figure 2. Clovis Preforms

Beaver Lake (Cambron and Hulse 1975:10) (Figure 3)

Sample size: 30

These points display a constricted hafting area, with an expanded rounded (19), or expanded pointed (11) auriculate base. Beaver Lake projectile points are associated with the Middle Paleoindian period ca. 11,00 to 10,500 B.P. (Anderson 1989).

Measurements: Length: (3 complete) 64.97-74.65mm, mean 69.99mm; (27 basal fragments) 12.54-61.93mm, mean 40.75mm; Basal Depth: (15) 1.46-7.82mm, mean 4.12mm; Basal Width: (25) 17.70-30.70mm, mean 24.82mm; Thickness: 4.24-7.58mm, mean 6.04mm; Lateral Grinding: right (29) 12.25-35.32mm, mean 19.47mm; left; (28) 11.66-33.44mm, mean 19.23mm

Chert Type: Dover-27, Fort Payne-3

Quad (Cambron and Hulse 1975:107) (Figure 3)

Sample size: 10

These are medium-to-large sized, expanded-rounded, auriculate-base projectile points. Quad projectile points are associated with the Middle Paleoindian period, ca. 11,000 to 10,500 B.P. (Anderson 1989).

Measurements: Length: (2 complete) mean 77.19mm; (8 basal fragments) 16.12-60.76mm, mean 39.68mm; Basal Depth: (9) 2.75-9.36mm, mean 6.27mm; Basal Width: (7) 24.03-36.36mm, mean 28.27mm; Body Width: (8) 21.88-30.79mm, mean 26.06mm; Thickness: 4.28-8.34mm, mean 6.33mm; Lateral Grinding: right; 12.90-33.99mm, mean 23.47mm; Teft; 12.90-30.66mm, mean 24.22mm

Chert Type: Dover-9, Fort Payne-1

Greenbrier Dalton (Cambron and Hulse 1975:38) (Figure 4)

Sample size: 36

These are medium-sized, auriculate-base projectile points with expanded auricules. These points typically display basal thinning flakes and are often referred to as fluted Daltons. Greenbrier Dalton projectile points were found within level D at the Stanfield-Worley Bluff Shelter which yielded a radiocarbon date of 9640 ± 450 years B.P. (Cambron and Hulse 1975). Greenbrier Dalton projectile points are associated with the Late Paleoindian period, ca. 10,500 - 9,900 B.P. (Anderson 1989).

Measurements: Length: (24 complete) 39.61-80.79mm, mean 56.17mm; (29 basal fragments) 22.08-66.07mm, mean 42.35mm; Basal Depth: (29) 1.38-7.93mm, mean 4.06mm; Basal Width: (35) 20.10-29.23mm, mean 24.54mm; Body Width: (34) 13.67-28.16mm, mean 20.75mm; Thickness: (36) 4.13-7.54mm, mean 5.76mm; Lateral

Figure 3. Upper Row: Clovis

Bottom Row: Cumberland, Beaver Lake, Quad

Grinding: right; (36) 10.32-20.29mm, mean 15.35mm; left; (35) 10.25-21.78mm, mean 15.91mm

Chert Type: Dover

Greenbrier (Cambron and Hulse 1975:58) (Figure 5)

Sample size: 208

These medium-to-large sized, auriculate-base projectile points have shallow side notches. Greenbrier projectile points are associated with the Late Paleoindian period, ca. 10,500 to 9,900 B.P. (Anderson 1989).

Measurements: Length: (49 complete) 42.40-105.93mm, mean 70.08mm; (159 basal fragments) 12.04-71.90mm, mean 41.04mm; Basal Depth: (88) 1.10-6.16mm, mean 2.19mm; Basal Width: (190) 15.08-41.68mm, mean 25.69mm; Body Width: (192) 10.41-41.31mm, mean 23.43mm; Thickness: (207) 3.48-14.22mm, left; (193) 7.90-24.23mm, mean 14.54mm

Chert Type: Dover-207, Fort Payne-1

Greenbrier Preform

Sample size: 8

This category consists of unground, auriculate base preforms with shallow side notches.

Measurements: Length: 34.61-90.12mm, mean 53.53mm; Basal Depth: --; Basal Width: (7) 25.12-38.22mm, mean 28.84mm; Body Width: 24.75-60.18mm, mean 31.91mm; Thickness: 5.56-8.70, mean 7.01mm

Chert Type: Dover

Blade Knife (Figure 6)

Sample size: 34

This category consists of unifacially sharpened decortication flakes which are at least twice as long as wide. Twelve of these examples were unifacially worked on one lateral edge and exhibited use wear attrition on the opposite lateral edge. Nine specimens were unifacially worked on both lateral edges. The remaining specimens exhibited all edges unifacially worked (7), attrition wear on both lateral edges (3), or one unifacially worked edge (3).

Measurements: Length: 54.76-137.44mm, mean 91.18mm; Width: 21.01-67.80mm, mean 41.03mm; Thickness: 5.02-23.28mm, mean 10.61mm

Flake Type: Tertiary-21, Secondary 13

Chert Type: Dover-21, Dover variant-13

Figure 4. Greenbrier Daltons

Flake Knife

Sample size: 14

Decortication flakes which were utilized as expedient knives comprise this category. Five of these specimens exhibit use wear attrition along one (2) or both (3) lateral edges, which are thought to be expedient knives. The remaining nine specimens were unifacially worked on one (2) or both (7) lateral edges.

Measurements: Length: 31.79-109.25mm, mean 58.75mm; Width: 25.90-50.14mm, mean 38.21mm; Thickness: 3.76-17.63mm, mean 9.49mm

Flake Type: Tertiary-8, Secondary-6

Chert Type: Dover-10, Dover variant-4

Backed Knife

Sample size: 4

These are large, primary decortication flakes with a low angle, unifacially worked lateral edge, opposed by a lateral edge retaining cortex from the parent material.

Measurements: Length: 49.09-118.08mm, mean 80.71mm; Width: 19.19-39.38mm, mean 30.38; Thickness: 9.69-19.05, mean 12.75

Flake Type: Primary

Chert Type: Dover-3, Dover variant-1

Blade Knife/Beak

Sample size: 4

The distal end of these large blade flakes was unifacially worked into a beak implement. The lateral edges are low angled and unifacially sharpened.

Measurements: Length: 96.29-107.82mm, mean 100.98mm; Width: 35.21-42.15mm, mean 39.05mm; Thickness: 9.20-12.03mm, mean 10.92mm

Flake Type: Secondary

Chert Type: Dover variant

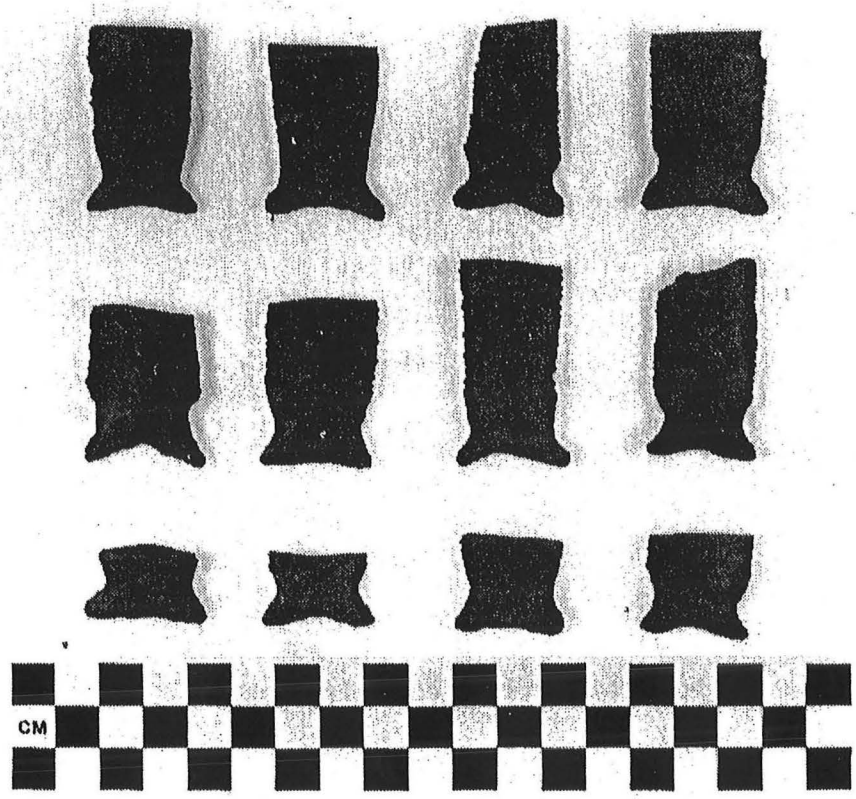

Figure 5. Greenbriers

Sidescraper

Sample size: 12

These tools typically exhibit unifacially worked lateral edges with light to heavy step fracture crushing along the working edge.

Measurements: Length: 56.10-149.66mm, mean 79.49mm; Width: 26.07-48.90mm, mean 36.32mm; Thickness: 7.65-21.62mm, mean 12.99mm

Flake Type: Secondary-28, Tertiary-10

Chert Type: Dover-7, Dover variant-4, Fort Payne-1

Backed Sidescraper

Sample size: 2

These are very large, primary decortication flakes which have cortex on the lateral edge opposite the working edge.

Measurements: Length: 184.29, 168.05mm; Width: 38.32, 43.11mm; Thickness: 26.99, 23.86mm

Flake Type: Primary

Chert Type: Dover-1; Dover variant-1

Sidescraper/Knife

Sample size: 4

This category consists of large, secondary decortication flakes which have a steeply angled lateral edge and a lower angle lateral edge. The steeply angled lateral edge exhibits crushing from use as a sidescraper, while the lower angle lateral edge exhibits fine unifacial resharpening from use as a knife.

Measurements: Length: 68.28-108.83mm, mean 93.03; Width: 33.46-56.77mm, mean 42.02; Thickness: 10.60-19.64mm, mean 15.37mm

Flake Type: Secondary

Chert Type: Dover

igure 6. FLAKE ~~Blade~~ Knives

Endscraper

Sample size: 38

The category consists of decortication flakes which display an endscraper on the distal end. Several sub-types make up this category including: simple endscraper or Type 24a (13), triangular endscrapers Type 24c (8), or Type 25b (15), and endscraper on end of blade (2) or Type 27 (Kraft 1973).

Measurements: Length: 27.13-77.65mm, mean 53.16mm; Width: 21.82-53.40mm, mean 31.34mm; Thickness: 4.68-27.48mm, mean 11.50mm

Flake Type: Secondary-28, Tertiary-10

Chert Type: Dover-22, Dover variant-15, Fort Payne-1

Spurred Endscraper (Figure 7)

Sample size: 17

Nine specimens are spurred on either side of the endscraper, which Kraft (1973) describes as Type 22a. Five specimens display a single spur on the right (Kraft Type 22c), and three specimens are spurred on the left side of the endscraper (Kraft Type 22b). Eight also display unifacial flaking along the lateral edges.

Measurements: Length: 30.20-73.60mm, mean 49.32mm; Width: 24.40-38.29mm, mean 33.65mm; Thickness: 5.59-14.17mm, mean 8.79mm

Flake Type: Secondary-11, Tertiary-6

Chert Type: Dover

Endscraper/Sidescraper

Sample size: 11

The lateral edges and distal ends of these flake tools display unifacial step fracture crushing.

Measurements: Length: 37.61-101.09mm, mean 71.04mm; Width: 25.68-43.36mm, mean 34.08mm; Thickness: 8.15-17.50mm, mean 12.45mm

Flake Type: Secondary-8, Tertiary-3

Chert Type: Dover-10, Dover variant-1

Figure 7. Spurred Endscrapers

Hafted Endscraper

Sample size: 1

The distal end of this flake was unifacially worked as an endscraper. The proximal end was unifacially tapered, which probably enabled this tool to be socketed into a bone or antler handle.

Measurements: Length: 90.00mm; Width: 28.73mm; Thickness: 9.04mm

Flake Type: Secondary

Chert Type: Dover

Endscraper/Knife

Sample size: 5

Each of these flake tools displays a well defined, unifacially worked distal end, while the lateral edge is attritionally defined (3) or unifacially worked (2).

Measurements: Length: 49.73-69.64mm, mean 61.96mm; Width: 30.43-55.11mm, mean 43.15mm; Thickness: 5.32-12.09mm, mean 91.47mm

Flake Type: Secondary-3, Tertiary-2

Chert Type: Dover

Blade Knife/Spokeshave/Graver

Sample size: 2

The distal end of these flake tools displays a graver tip with semi-circular indentions on either side. This portion of the tool may have been used as a grooving implement. The low angle lateral edges have been unifacially sharpened.

Measurements: Length: mean 87.39mm; Width: mean 40.38mm; Thickness: mean 13.23mm

Flake Type: Secondary-1, Tertiary-1

Chert Type: Dover

Endscraper/Sidescraper/Knife

Sample size: 2

These tools exhibit one steeply angled and an opposite lower angled lateral edge. The steep angled lateral edge displays light, unifacial step fracture crushing from use as a sidescraper. The lower angled edge displays light, unifacial attrition wear from use as a knife.

Measurements: Length: 79.59, 44.82mm; Width: 35.00, 36.94mm; Thickness: 12.86, 13.25mm

Flake Type: Secondary

Chert Type: Dover

Blade Knife/Endscraper/Beak

Sample size: 1

The striking platform was removed from this flake to form the beak implement. The lateral edges have been unifacially sharpened. The endscraper is formed on the distal end of the flake and exhibits a lightly ground attrition wear.

Measurements: Length: 102.02mm; Width: 26.69mm; Thickness: 8.63mm

Flake Type: Tertiary

Chert Type: Dover

Blade Knife/Graver Tip

Sample size: 1

The lateral edges of the flake tool display very fine, unifacial flaking. The graver tip was fashioned on the distal end which exhibits use wear attrition on the ventral side.

Measurements: Length: 98.79mm; Width: 30.04mm; Thickness: 5.73mm

Flake Type: Secondary

Chert Type: Dover

Knife/Endscraper/Graver

Sample size: 1

This multipurpose tool displays unifacial flaking on the distal end and a graver tip on the proximal end. The lateral edges have been unifacially worked.

Measurements: Length: 64.38mm; Width: 25.40mm; Thickness: 7.59mm

Flake Type: Secondary

Chert Type: Dover

Blade Knife/Endscraper/Spokeshave

Sample size: 1

One lateral edge displays a spokeshave while the opposite lateral edge exhibits attrition wear from probable use as a knife. Light step fracture crushing is present along the endscraper edge.

Measurements: Length: 65.35mm; Width: 28.65mm; Thickness: 8.11mm

Flake Type: Tertiary

Chert Type: Dover

Sidescraper/Knife/Graver

Sample size: 1

One lateral edge displays light, unifacial step fracture crushing from probable use as a sidescraper. The opposite lateral edge exhibits fine, unifacial attrition wear from use as a knife. The graver tip was formed on the distal end of this flake and displays use wear on the ventral side.

Measurements: Length: 101.52mm; Width: 41.06mm; Thickness: 10.75mm

Flake Type: Secondary

Chert Type: Dover

Conclusions

Analysis of this assemblage of projectile points and unifacial tools indicates habitation of the site area during the Early, Middle, and Late Paleoindian periods. Continued occupation of 40HS200 during the Archaic period

is also suggested by a number of representative projectile points. Correlations of specific tool types with particular projectile points are not possible with these surface collected materials.

The presence of Clovis projectile points and terminated fluted preforms supports initial occupation of 40HS200 during the Early Paleoindian period, ca. 12,000-11,000 B.P. Cumberland, Beaver Lake, and Quad projectile points, along with Cumberland preforms comprise evidence for site use during the Middle Paleoindian period, ca. 11,000-10,500 B.P. The Late Paleoindian period, ca. 10,500-9,900 B.P., is well represented by Greenbrier and Greenbrier Dalton projectile points, along with Greenbrier preforms. The Early, Middle, and Late Archaic periods are represented by Kirk Corner-Notched, Big Sandy, and various stemmed types.

The large number of Greenbrier and coeval projectile points suggests a prolonged habitation of this site during the Late Paleoindian period. One hundred and fifty-nine (76%) of the Greenbrier points were snapped above the haft, suggesting use of the area for rearmament during this time.

Some researchers view Dalton and related projectile point types, including Greenbrier, as representative of an Early Archaic adaptation to the Early Holocene environment (Gramley and Funk 1991). We believe that such morphological characteristics as lateral grinding and auriculate bases belong in a Late Paleoindian or Transitional Paleoindian/Early Archaic stage. This seems a better way to differentiate this unique component from the later, Early Archaic corner-notched projectile point cluster. We do not argue that Dalton culture was oriented toward the exploitation of modern species of flora and fauna. However, we still see it as a transitional period between true Paleoindian and Early Archaic times.

Unifacial tools in this assemblage were made from primary (6), secondary (96) and tertiary (53) decortication flakes. The tools made from secondary flakes exhibit flake scars and lateral edge angles typical of polyhedral core reduction. These reduction flakes were selected for tools while larger spalls were chosen for projectile points. Tertiary flakes produced from projectile point manufacture were readily available as expedient tools.

The majority of projectile points (285 or 96%) and unifacial tools (104 or 67%) from this site were made of high quality Dover chert. The remaining projectile points were made of Fort Payne (6) or Dover variant (5), whereas the remaining unifacial tools were also made of Dover variant (50 or 32%) and Fort Payne chert (1).

Although no formal test excavations have been conducted at 40HS200, excavations performed at the Nuckolls site (Lewis and Kneberg 1958; McNutt and Graham 1965) determined that an intact Paleoindian component was not present. Erosional forces that destroyed the integrity of the Nuckolls site have probably similarly affected 40HS200 since it is located on the same geological feature. Although the integrity of this site has been destroyed by the destructive forces of Kentucky Lake, the artifact assemblage can provide helpful insights regarding Paleoindian occupation of the Tennessee River Valley.

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