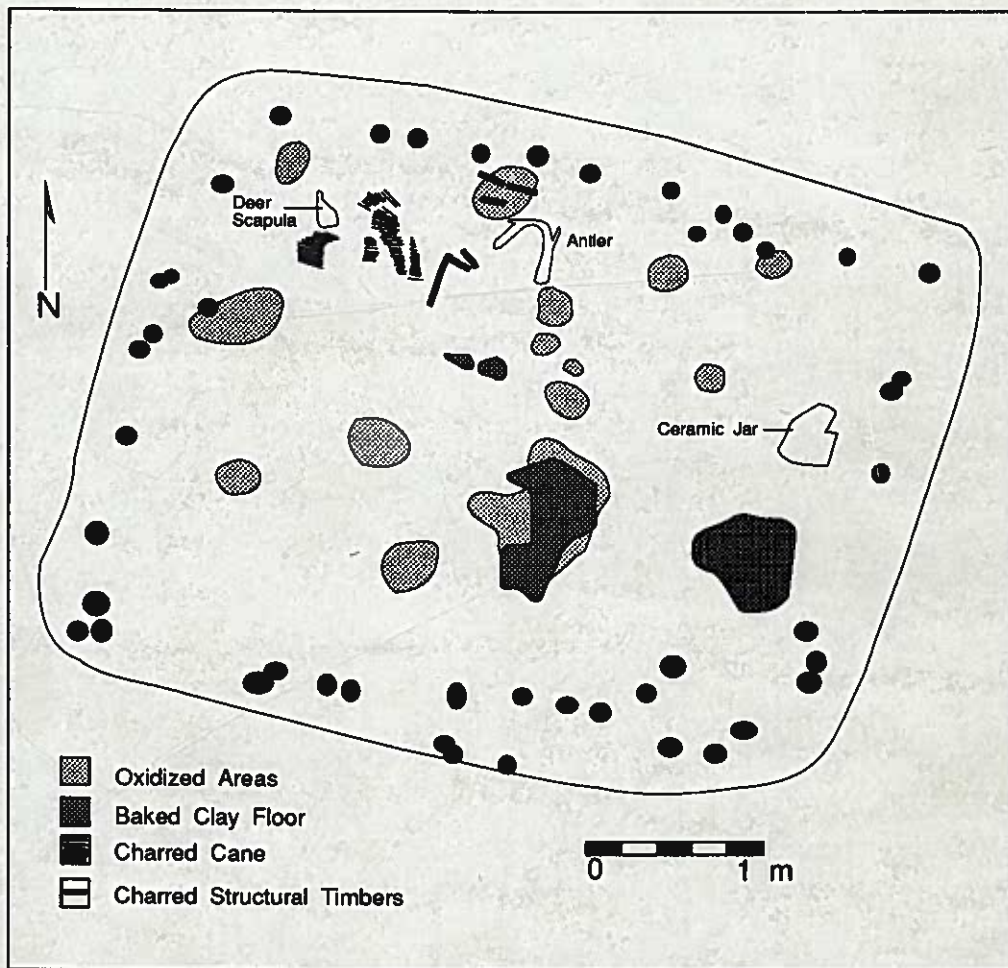


CURRENT ARCHAEOLOGICAL RESEARCH IN KENTUCKY: VOLUME TWO



Edited By
David Pollack
and
A. Gwynn Henderson

Kentucky Heritage Council

***CURRENT ARCHAEOLOGICAL
RESEARCH IN KENTUCKY:
VOLUME TWO***

*edited
by
David Pollack
and
A. Gwynn Henderson*

- 1992 -

KENTUCKY HERITAGE COUNCIL

Copyright 1992
Kentucky Heritage Council
All Rights Reserved

This publication has been funded in part with state funds and federal funds from the National Park Service, Department of the Interior. However, the contents do not necessarily reflect the views or policies of the Department of the Interior.

This agency receives federal funds from the National Park Service. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination in departmental Federally Assisted Programs on the basis of race, color, national origin, age or handicap. Any person who believes he or she has been discriminated against in any program, activity or facility operated by a recipient of federal assistance should write to: Director, Equal Opportunity Program, U.S. Department of the Interior, National Park Service, P.O. Box 37127, Washington, D.C. 20013-7127.

TABLE OF CONTENTS

Shell Mounds as Burial Mounds: A Revision of the Shell Mound Archaic - Cheryl Claassen	1
The Grayson Site: Late Archaic and Late Woodland Occupations in the Little Sandy Drainage - R. Jerald Ledbetter and Lisa D. O'Steen	13
Archaeological Investigation of the Kay Shelter in Breathitt County, Kentucky - Kurt H. Fiegel, Betty J. McGraw, and James L. Hixon	43
Falls Plain: A Middle Woodland Ceramic Type from the Falls of the Ohio River Region - Stephen T. Mocas	55
The Rogers Site Complex in Boone County, Kentucky - Jeannine Kreinbrink	79
The Yankeetown Occupation at the Foster Site in Daviess County, Kentucky - Tom Sussenbach	103
Chronological and Spatial Perspectives on Ceramic Vessel form at Wickliffe Mounds (15BA4) - Kit W. Wesler	119
Is The Stone Site Protohistoric? - Kenneth C. Carstens	139
Carpenter Farm: A Middle Fort Ancient Community in Franklin County, Kentucky - David Pollack and Charles D. Hockensmith	151
The Florence Site Complex: Two Fourteenth Century Fort Ancient Communities in Harrison County, Kentucky - William E. Sharp and David Pollack	187
Capitol View: A Early Madisonville Horizon Settlement in Franklin County, Kentucky - A. Gwynn Henderson	223
Archaeological Contexts and Associations: The Lextran Archaeobotanical Collection - Jack Rossen	241
References	252

THE FLORENCE SITE COMPLEX: TWO FOURTEENTH CENTURY FORT ANCIENT COMMUNITIES IN HARRISON COUNTY, KENTUCKY

By

William E. Sharp
United States Forest Service
Berea, Kentucky
and
David Pollack
Kentucky Heritage Council
Frankfort, Kentucky

ABSTRACT

Archaeological investigations of the Florence Site Complex (15Hr21 and 15Hr22) in Harrison County, Kentucky, documented the remains of two Elkhorn phase (A.D. 1200-1400) villages and generated new data on middle Fort Ancient material culture, subsistence practices, and village configuration. Both sites were occupied during the fourteenth century, with Site 15Hr21 predating Site 15Hr22. The distribution of artifacts, burials, pits, and structures at these sites indicates that they consisted of concentric mortuary, residential, and refuse disposal zones surrounding a central plaza.

INTRODUCTION

This paper summarizes the results of archaeological investigations of two Fort Ancient sites (15Hr21 and 15Hr22) in Harrison County, Kentucky, collectively referred to as the Florence Site Complex. These sites are located approximately 4 km northeast of Cynthiana, Kentucky and are situated on the crest of a north-south ridge that separates the South Fork of the Licking River from Mill Creek (Figure 1). This broad, relatively level ridge is approximately 35 m higher in elevation than the nearby stream bottoms. Site 15Hr21, located west of Site 15Hr22, is separated from the latter by a swale that drains to the south.

The field investigations, which were conducted during the springs of 1989 and 1990, were designed to evaluate the integrity of the archaeological deposits at each site, and to collect data on middle Fort Ancient material culture and subsistence patterns in the Central Bluegrass region. In order to collect information on the internal organization of middle Fort Ancient communities, a larger area was excavated at Site 15Hr22 than at Site 15Hr21.

A 13 m² block was excavated at Site 15Hr21, while nine areas totaling 134.5 m² were investigated at 15Hr22. At each site, a small sample of the plowzone was screened through 6.35 mm mesh. Fill from all excavated features, structures, and burials also was screened through 6.35 mm mesh. Flotation and radiocarbon samples were taken from features, structures, and burial pits.

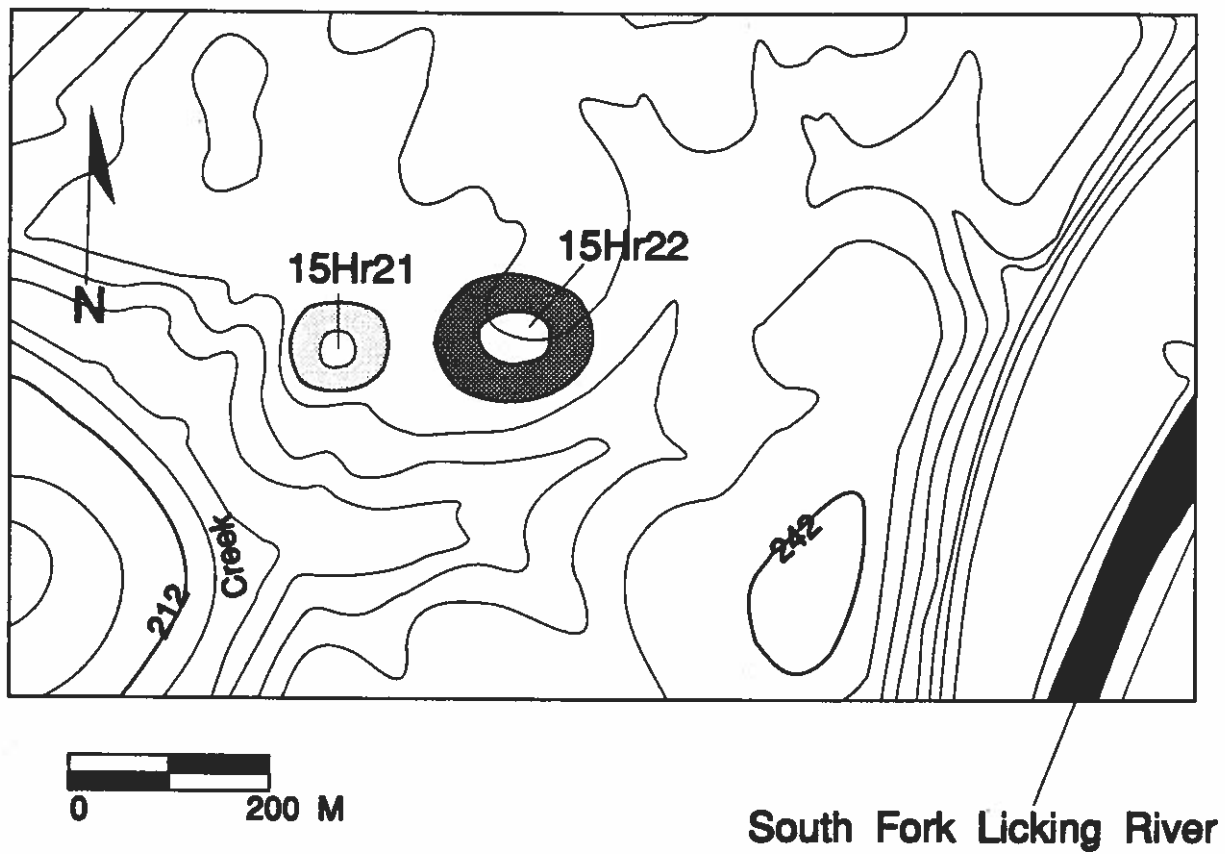


Figure 1. Relationship of Site 15Hr21 to Site 15Hr22

The types of artifacts recovered from both sites are consistent with collections from other middle Fort Ancient sites in central Kentucky (Fassler 1987; Sharp 1990a:482-484; Turnbow 1988b:286-289). Based on the data collected from the Florence Site Complex, as well as archaeological investigations conducted at Guilfoil (15Fa167) (Fassler 1987) and Carpenter Farm (15Fr36A) (Pollack and Hockensmith, this volume), the authors propose that the middle Fort Ancient (A.D. 1200-1400) period in the Central Bluegrass region of Kentucky be referred to as the Elkhorn phase. Designating a phase for this region distinguishes central Kentucky middle Fort Ancient from the middle Fort Ancient Manion phase (Henderson et al. 1992) of northeastern Kentucky and from other middle Fort Ancient phases in the middle Ohio River Valley, such as Schomaker (Cowan et al. 1990), Oehler (Riggs 1992), Anderson (Essenpreis 1978), and Baum (Prufer and Shane 1970). Other sites with components assignable to the Elkhorn phase include Buckner (15Bb12), Singer (15Sc3), Goff Village (15Ck363), and Mercer Village (15Me15) (Sharp 1990a; Turnbow 1988b).

Despite the fact that several Elkhorn phase sites have been investigated, these studies were not of sufficient intensity to determine the overall organization of these communities. Where more intensive investigations have been conducted (e.g., Buckner), provenience information is lacking for much of the collection (Sharp 1990a). However, intensive investigations conducted at the SunWatch Site in Ohio have generated some comparative information on middle Fort Ancient village organization (Heilman et al. 1990; Nass 1989). This information provides a framework for comparing and contrasting the village configuration documented at Site 15Hr22.

The remainder of this paper is organized as follows. A brief description of each site is presented, which includes a description of the cultural materials recovered, subsistence patterns identified, and the types of features encountered. This is followed by a description of the internal organization of Site 15Hr22 and a consideration of village population size and the temporal relationship of these two sites.

SITE 15HR21

Based on the horizontal distribution of artifacts and features, Site 15Hr21 appears to represent the remains of a circular Fort Ancient village with a diameter of ca. 80 m. Cultural materials and features at this site were restricted to a ca. 25-30 m wide band that encompasses an area with a diameter of ca. 25 m. Unlike other circular Fort Ancient villages such as Site 15Hr22, no differences in soil color were discernable between the artifact band and the central area. The stratigraphy in all areas of the site consists of a medium brown silt loam plowzone (ca. 30-35 cm thick) overlying a brownish orange silty clay subsoil or cultural features that intrude into the subsoil. Calibrated radiocarbon dates of A.D. 1280(1326,1353,1363,1365,1389)1430 and A.D. 1305(1415)1445 (Table 1) were obtained from two charcoal samples recovered from Site 15Hr21.

Table 1. Radiocarbon Dates.

Laboratory Number	Radiocarbon Age	Calibrated Radiocarbon Dates at two sigma (Stuiver and Pearson 1986)
Site 15Hr21		
Beta-38925	600 \pm 60 B.P.	A.D. 1280(1326,1353,1363,1365,1389) 1430
Beta-38926	520 \pm 50 B.P.	A.D. 1305(1415)1445
Site 15Hr22		
Beta-38927	470 \pm 50 B.P.	A.D. 1330(1432)1490
Beta-38928	600 \pm 50 B.P.	A.D. 1280(1326,1353,1363,1365,1389)1420
Beta-38929	630 \pm 50 B.P.	A.D. 1280(1304,1371,1384)1410

MATERIALS RECOVERED

Ceramics

A total of 591 sherds was recovered from Site 15Hr21 (Table 2). Of these, 261 are larger than 4 cm² and 330 are smaller than 4 cm². All sherds larger than 4 cm² were analyzed, as were all decorated body sherds, appendages, and rim sherds that measured less than 4 cm². This resulted in the analysis of a total of 281 sherds. Body sherds smaller than 4 cm² were simply lotted by provenience and counted.

Exterior surface treatment could not be determined for nine sherds. Of the remaining specimens, 71.0 were classified as Jessamine Cordmarked, 18.4 percent as Jessamine Plain, and 10.7 percent as Jessamine Knot Roughened (Table 2). The most common exterior surface colors are light brown, reddish brown, dark brown, and orange brown, while the most common interior surface colors are light brown, reddish brown, dark brown, white, and orange brown (Table 2). A majority of the rims that could be oriented are direct (Figure 2b,c), but 26.7 percent are slightly outflaring (Figure 2d) and another 13.3 percent are inslanted. More than 50 percent of the lips are rounded, but flat and pointed lips are well represented.

Ceramics from Site 15Hr21 are tempered with a combination of shell and limestone (69.3 percent), shell (20.7 percent), limestone and shell (8.3 percent), or limestone (1.8 percent). Some specimens are well-fired and temper particles are quite small, while others are not as well-fired and have very large temper particles including parts of mussel hinges. Most of the limestone fragments are very small, and in mixed tempered sherds they often account for a very small percentage of the observed temper. Manganese concretions are quite common in all sherds, and the holes left by these concretions were often difficult to distinguish from those left by small eroded limestone fragments.

The only decorative treatment identified in the Site 15Hr21 collection is incising on vessel necks (n=12). Almost two-thirds of the incising represents curvilinear designs (Figure 2a), while the remainder exhibit single incised lines, a rectilinear design, or a combination of rectilinear and curvilinear lines. Appendages consist of one thick strap handle, two thin strap handles, and an effigy. The effigy is a elongated human face (Figure 2e) that may have been attached to the rim of a vessel.

Table 2. Florence Site Complex Ceramics.

Site 15Hr21	Frequency	Percent	Site 15Hr22	Frequency	Percent
Ceramics Objects			Ceramics Objects		
Body	561	94.9	Body	3595	91.7
Rim	25	4.2	Rim	245	6.3
Detached Appendage	4	1.7	Detached Appendage	48	1.2
Disk	1	0.2	Disk	21	.5
Total	591	100.0	Base	7	.2
			Bead	3	.1
			Total	3919	100.0
Exterior Surface Treatment			Exterior Surface Treatment		
Cordmarked	177	65.1	Cordmarked	930	61.3
Plain	50	18.4	Plain	339	22.4
Knot Roughened	29	10.6	Smoothed-Over Cordmarked	182	12.0
Smoothed-Over Cordmarked	16	5.9	Knot Roughened	65	4.3
Total	272	100.0	Total	1516	100.0
Temper			Temper		
Shell and Limestone	194	69.3	Shell and Limestone	195	48.4
Shell	58	20.7	Shell	190	47.1
Limestone and Shell	23	8.3	Limestone and Shell	18	4.5
Limestone	5	1.8	Total	403	100.0
Total	280	100.1			
Exterior Surface Color			Exterior Surface Color		
Light Brown	82	30.0	Light Brown	106	27.2
Reddish Brown	60	22.0	Dark Brown	84	21.6
Dark Brown	45	16.5	Light Gray	37	9.5
Orange Brown	37	13.6	Black	37	9.5
Reddish Orange	21	7.7	Dark Gray	31	8.0
Tan	18	6.6	Tan	29	7.5
Light Gray	4	1.5	Reddish Brown	19	4.9
Black	3	1.1	White	18	4.6
White	2	0.7	Reddish Orange	17	4.4
Dark Gray	1	0.4	Orange Brown	11	2.8
Total	273	100.0	Total	389	100.0
Interior Surface Color			Interior Surface Color		
Light Brown	127	49.8	Dark Brown	83	23.9
Reddish Brown	39	15.3	Black	75	21.6
Dark Brown	37	14.5	Light Brown	71	20.4
White	20	7.8	Light Gray	31	8.9
Orange Brown	18	7.1	Dark Gray	30	8.6
Tan	7	2.7	Tan	21	6.0
Dark Gray	5	2.0	Reddish Brown	14	4.0
Reddish Orange	2	0.8	White	10	2.9
Total	255	100.0	Reddish Orange	8	2.3
			Orange Brown	5	1.4
			Total	348	100.0
Twist			Twist		
S	91	91.0	S	82	82.8
Z	8	8.0	Z	17	17.2
Both	1	1.0	Total	99	100.0
Total	100	100.0			

Table 1. Continued.

Site 15Hr21	Frequency	Percent	Site 15Hr22	Frequency	Percent
Rim Orientation					
Direct	9	60.0	Direct	122	59.2
Slightly Outflaring	4	26.7	Slightly Outflaring	64	31.1
Inslanting	2	13.3	Inslanting	20	9.7
Total	15	100.0	Total	204	100.0
Lip Shape					
Rounded	13	52.0	Flat	87	38.0
Flat	3	12.0	Rounded	63	27.5
Pointed	4	16.0	Pointed	39	17.0
Flat Exterior Protrusion	3	12.0	Flat Exterior Protrusion	31	13.5
Flat Interior and Exterior Protrusion	2	8.0	Flat Interior and Exterior Protrusion	9	3.9
Total	25	100.0	Total	229	100.0
Lip Decoration					
			Cordmarked	16	80.0
			Notched	1	5.0
			Incised	1	5.0
			Knot Roughened	1	5.0
			Smoothed-over Cordmarked	1	5.0
			Total	20	100.0
Rim and Neck Decoration					
<u>Surface Treatment</u>					
Cordmarked	6	50.0	Plain	56	59.6
Plain	2	16.7	Cordmarked	26	27.7
Plain and Cordmarked	2	16.7	Smoothed-over Cordmarked	10	10.6
Smooth-over Cordmarked	2	16.7	Plain and Cordmarked	1	1.1
Total	12	100.1	Knot Roughened	1	1.1
			Total	94	100.1
<u>Type</u>					
Curvilinear	7	63.6	Rectilinear	45	64.3
Single line	2	18.2	Curvilinear	11	15.8
Rectilinear	1	9.1	Recti- and Curvilinear	8	11.4
Recti- and Curvilinear	1	9.1	Single line	4	5.7
Total	11	100.0	Incised and Punctuation	1	1.4
			Punctuation	1	1.4
			Total	70	100.0
Rimfold or Rimstrip					
Rimfold	4	100.0	Rimfold	28	70.0
			Rimstrip	12	30.0
			Total	40	100.0
Appendage					
Thin Strap Handles	2	40.0	Thin Strap Handles	27	35.1
Thick Strap Handles	1	20.0	Thick Strap Handles	14	19.5
Handle Scar	1	20.0	Handle Scar	11	14.3
Effigy	1	20.0	Loop Handles	8	9.4
Total	5	100.0	Other Lugs	6	7.8
			Plain Clay Strip	4	6.5
			Simple U-Shaped Lugs	2	3.9
			Notched Clay Strip	1	1.3
			Lug Scar	1	1.3
			Total	74	100.0

Based on the analysis of the ceramics from the Florence Site Complex and its comparison to other early and middle Fort Ancient ceramic collections in the Central Bluegrass region (Fassler 1987; Pollack and Hockensmith this volume; Sharp 1984; Turnbow and Sharp 1988), Sharp and Pollack (1992) concluded that the Jessamine Series as defined by Turnbow (1988a) should be broadened to include shell tempered specimens. Originally restricted to limestone and mixed limestone and shell tempered sherds (Turnbow 1988a), shell tempered specimens, even though similar in all other respects, had not been assigned to the Jessamine Series. Similarly, Sharp and Pollack (1992) decided to expand the temporal parameters of the Jessamine Series to include the middle Fort Ancient period.

Since the Jessamine Series was defined (Turnbow 1988a), archaeological investigations have been conducted at several middle Fort Ancient sites in the Central Bluegrass region including Guilfoil (Fassler 1987), Carpenter Farm (Pollack and Hockensmith this volume), and the sites reported on here. It is clear, based on the results of these investigations, that middle Fort Ancient ceramics from central Kentucky are not assignable to the Fox Farm Series of northeastern Kentucky and that though middle Fort Ancient ceramic assemblages contain more shell or mixed tempered ceramics and a higher percentage of decorated ceramics than early Fort Ancient collections, in general they cannot be easily distinguished from early Fort Ancient ceramics.

Lithics

A total of 290 lithic artifacts were recovered from Site 15Hr21 (Table 3) (only those lithic artifacts greater than 12.7 mm were analyzed). Of these, 21 are chipped stone tools and 269 are flakes, shatter, or core fragments. No groundstone tools were recovered. Only the bifaces and projectile points are described here.

Various stages of lithic reduction are represented in the biface category. These consist of blanks or preforms as well as finished tools. Four thin bifaces are triangular in shape and exhibit edge damage. This suggests they were used for cutting or scraping activities and probably functioned as knives. The remaining bifaces and biface fragments appear to represent various stages of chipped stone tool reduction.

Two nontriangular projectile points were recovered from the site. They consist of a small Brewerton Side Notched-like point (Justice 1987:115) and an Adena Stemmed-like base (Justice 1987:191). These points may represent earlier Archaic and Woodland period use of this locality, or they may have been transported to the site by Fort Ancient people who found them in nearby agricultural fields.

Four triangular projectile points were recovered. One has serrated edges (Figure 7e) and is similar to Type 3 Fine Triangular points (Railey 1992:158). This type also has been referred to as the Fort Ancient point (Justice 1987:227) and is primarily associated with Fort Ancient contexts that date between A.D. 1200 and 1400. The remaining three specimens have slightly convex bases and are long in relation to their width. All three could be broadly classified as Type 2 Fine Triangular (Railey 1992:156-158) or Madison Triangular (Justice 1987:224) points. The basal convexity and length of these specimens are attributes commonly associated with pre-A.D. 1400 Fort Ancient projectile point styles in the Central Bluegrass region (Turnbow and Sharp 1988:195-197).

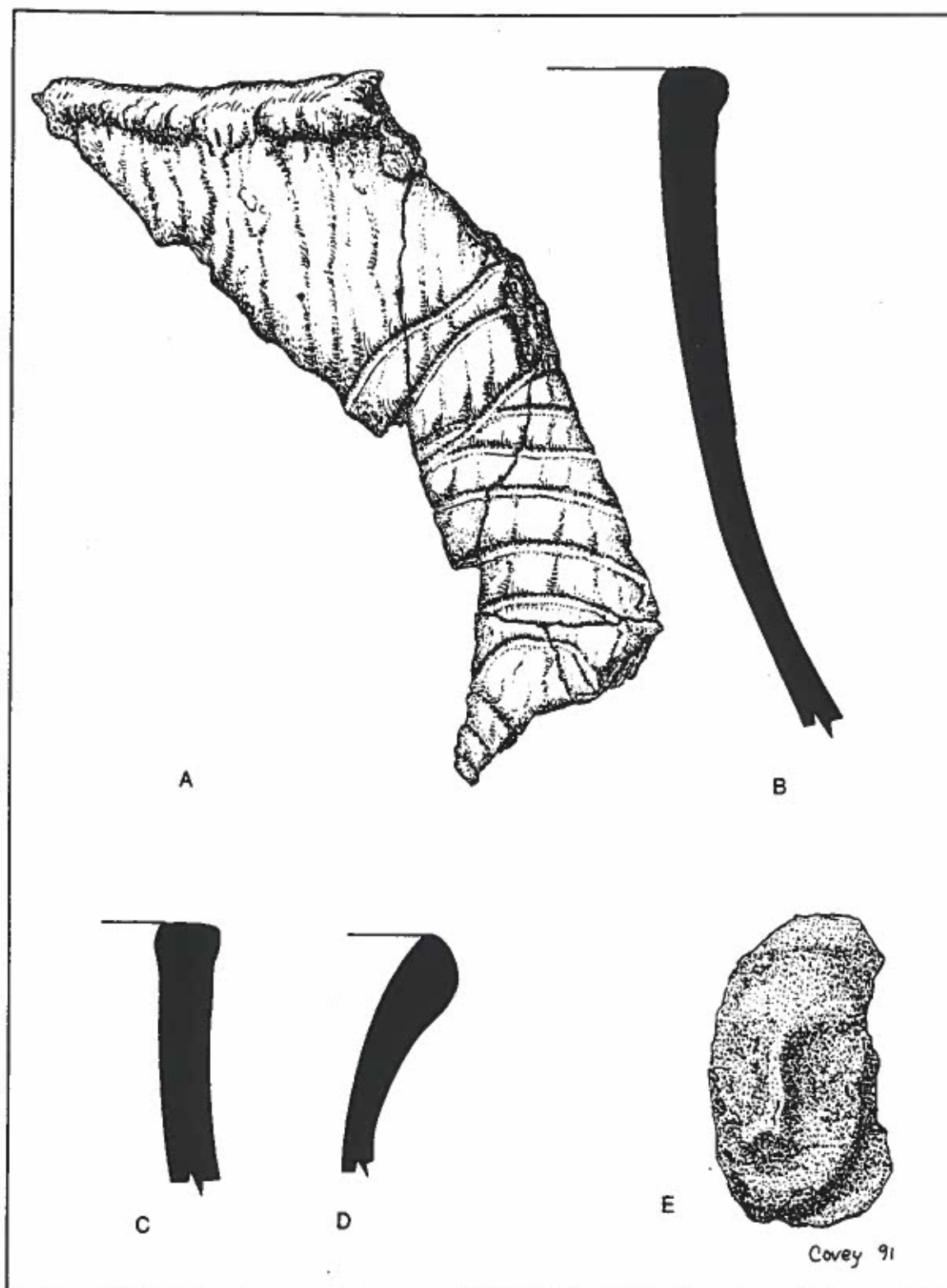


Figure 2. Site 15Hr21 Ceramics: a, decorated rim; b-d, rim profiles; e, human effigy.

Table 3. Lithic Artifacts.

Site 15Hr21	Frequency	Site 15Hr22	Frequency
Chipped Stone			
Flakes, shatter, or cores	269	Flakes, shatter, or cores	1,731
Thick bifaces	5	Thick bifaces	18
Thin bifaces	10	Thin bifaces	36
Projectile Points		Drills	6
Nontriangular	2	Unifacial scrapers	2
Type 2 Fine Triangular	3	Projectile Points	
Type 3 Fine Triangular	1	Nontriangular	6
Total	290	Crude Triangular	9
		Type 3 Fine Triangular	7
		Type 5 Fine Triangular	14
		Total	1,829
Groundstone			
		Granitic celt	1
		Possible limestone celt	2
		Coarse sandstone abraders	2
		Chipped limestone disks	11
		Pitted stones	2
		Fine-grained sandstone grinding slab	1
		Crinoid stem beads?	6
		Worked and polished cannel coal	1
		Siltstone elbow pipe	1
		Siltstone discoidal	1
		Total	28

Botanical Remains

Only 24 liters of soil were floated and analyzed from Site 15Hr21 (Table 4) (Rossen 1992b). The charcoal collection includes hickory (*Carya* spp.), yellow poplar (*Liriodendron tulipifera*) and white oak (*Quercus* spp.). Black walnut (*Juglans nigra*) accounts for about two-thirds of the nut shell. Cultigens are represented by maize, beans, and squash and possibly chenopod (*Chenopodium* spp.). Even though somewhat small, this collection is consistent with that recovered from other Fort Ancient sites (Rossen 1992a).

Faunal Remains

A sample of 784 faunal remains from 15Hr21 was analyzed (Table 5) (Tune 1992). Of the identifiable vertebrates, 69.9 percent are mammal, 16.2 percent are bird, 12.2 percent are reptile, and 0.8 percent are fish. Approximately 1 percent of the remains could not be assigned to a specific taxon. In general the faunal collection from Site 15Hr21 is similar to collections recovered from other Kentucky Fort Ancient sites (Breitburg 1988, 1992; Tune 1987). Animal exploitation focused on large mammals (deer, elk, and bear), small mammals (raccoons and squirrels), birds (wild turkey), and reptiles (primarily box turtles) (Table 6).

Table 4. Site 15Hr21 Botanical Remains.

	Frequency	Percent*	Gram Weight	Percent*
Wood Charcoal				
Hickory (<i>Carya</i> spp.)	151	26.4	1.6	25.4
White oak (<i>Quercus</i> spp.)	107	18.7	1.2	19.0
Black walnut (<i>Juglans nigra</i>)	29	5.1	0.4	6.3
Black locust (<i>Robinia pseudoacacia</i>)	80	14.0	0.9	14.3
Yellow poplar (<i>Liriodendron tulipifera</i>)	125	21.8	1.3	20.6
Sycamore (<i>Platanus occidentalis</i>)	81	14.1	0.9	14.3
Total identified wood charcoal	573	100.1	6.3	99.9
Unidentified wood charcoal	864		9.7	
Nuts				
Black walnut (<i>Juglans nigra</i>)	162	56.4	3.5	67.3
Hickory (<i>Carya</i> spp.)	113	39.4	1.7	32.7
Hazelnut (<i>Corylus</i> spp.)	1	0.4	0.0	0.0
Juglandaceae	11	3.8	0.0	0.0
Total	287	100.0	5.2	100.0
Tropical Cultigens				
Corn				
Kernels	17	37.0	0.0	0.0
Cupules	25	54.3	0.4	50.0
Beans				
Complete	1	2.2	0.1	12.5
Squash rind	3	6.5	0.3	37.5
Total	46	100.0	0.8	100.0
Seeds				
Chenopod (<i>Chenopodium</i> spp.)	2	28.6		
Bedstraw (<i>Galium</i> spp.)	3	42.8		
Unidentified	2	28.6		
Total	7	100.0		
* Calculated to nearest 0.1 percent				

Table 5. Identified and Unidentified Vertebrate Remains from Site 15Hr21 by Taxonomic Class.

Class	Number of Identified Elements	Percent of Identified Elements	Number of Unidentified Elements	Total	Percent of All Elements
Vertebrate	--	----	7	7	0.9
Mammal	145	57.1	405	548	69.9
Bird	58	22.8	69	127	16.2
Reptile	51	20.1	45	96	12.2
Fish	0	0.0	6	6	0.8
Total	254	100.0	532	784	100.0

Table 6. Summary of Identified Vertebrate Remains from Site 15Hr21.

Vertebrate Taxon	Frequency	MNI
Mammals		
<u>Odocoileus virginianus</u> , White-tailed deer	115	6
<u>Cervus canadensis</u> , Elk	9	1
<u>Lynx rufus</u> , Bobcat	7	1
<u>Felis concolor</u> , Mountain lion	2	1
<u>Procyon lotor</u> , Raccoon	4	1
<u>Ursus americanus</u> , Black bear	6	1
<u>Canis cf. familiaris</u> , Domestic dog	1	1
<u>Sciurus carolinensis</u> , Gray Squirrel	1	1
Birds		
<u>Meleagris gallopavo</u> , Wild turkey	58	6
Reptiles		
<u>Cherlydra serpentine</u> , Snapping turtle	15	2
<u>Terrapene carolina</u> , Eastern box turtle	24	2
<u>Chrysemys spp.</u> , Slider/Cooter	1	1
Serpentes, Snake	5	1
Colubridae, Nonpoisonous snake	5	1
<u>Natrix spp.</u> , Water snake	1	1
Total Identified Vertebrates	254	

FEATURES

Features identified at Site 15Hr21 consist of two overlapping pits (Features 1 and 2) located near the northwestern edge of the site and an oxidized area (Feature 3) situated near the site's eastern edge. However, only the pit features were excavated during the course of this study. While most of Feature 1 was excavated, only the eastern portion of Feature 2 was investigated. Feature 1 (2.50 x 2.22 m) had sloping sides, a flat to undulating bottom, and a maximum depth of 40 cm. The excavated portion of Feature 2 (1.27 x .70 m) had a depth of 29 cm and sloping sides. The matrix of both features was a dark brown silt loam that contained an abundance of charcoal, faunal remains, ceramics, and other artifacts.

SITE 15HR22

Site 15Hr22 consists of an elliptical shaped, dark surface midden containing an abundance of cultural materials surrounding a central area that is lighter in color and devoid of artifacts. A burial mound is located at the interface of the northern edge of the central area and the midden zone (Figure 3). The entire site measures approximately 110 m north-south by 140 m east-west. The midden zone ranges in width from 22 to 40 m with an average width of about 30 m, and the central area measures 58 m north-south by 80 m east-west.

The low conical earth mound measures 17 m north-south by 23 m east-west and stands 40 to 50 cm tall. Modern agricultural practices have undoubtedly reduced the original height of the mound and distorted its horizontal dimensions. A core sample removed from the center of the mound using a split spoon soil core exhibited mottled deposits to a depth of 53 cm below the surface.

The stratigraphy of the midden zone at Site 15Hr22 consists of a dark brown silt loam plowzone (average thickness 30 to 35 cm) overlying a brownish orange silty clay subsoil or features that intrude into the subsoil. In the central area, the plowzone consists of a medium brown silt loam that is similar in color and texture to the plowzone at Site 15Hr21. Plowscars were readily apparent at the base of plowzone, and the depth of these scars indicates that portions of the site have been chisel plowed at least once in the past. Figure 3 shows the areas of Site 15Hr22 that were examined. Calibrated radiocarbon dates of A.D. 1330(1432)1490, A.D. 1280 (1326,1353,1363,1365,1389)1420, and A.D. 1280(1304,1371,1384)1410 were obtained from charcoal samples recovered from Site 15Hr22 (Table 1).

MATERIALS RECOVERED

Ceramics

A total of 3,919 sherds are present in the Site 15Hr22 ceramic collection (Table 2). Of these, 1,453 are larger than 4 cm² and 2,466 are smaller than 4 cm². Exterior surface treatment was recorded for all body sherds greater than 4 cm² (n=1,217), while those smaller than 4 cm² were simply lotted by provenience and counted. More detailed information was collected for all rims, appendages, and decorated body sherds, regardless of size. This resulted in 352 sherds being subject to detailed analysis (236 greater than 4 cm² and 116 less than 4 cm²).

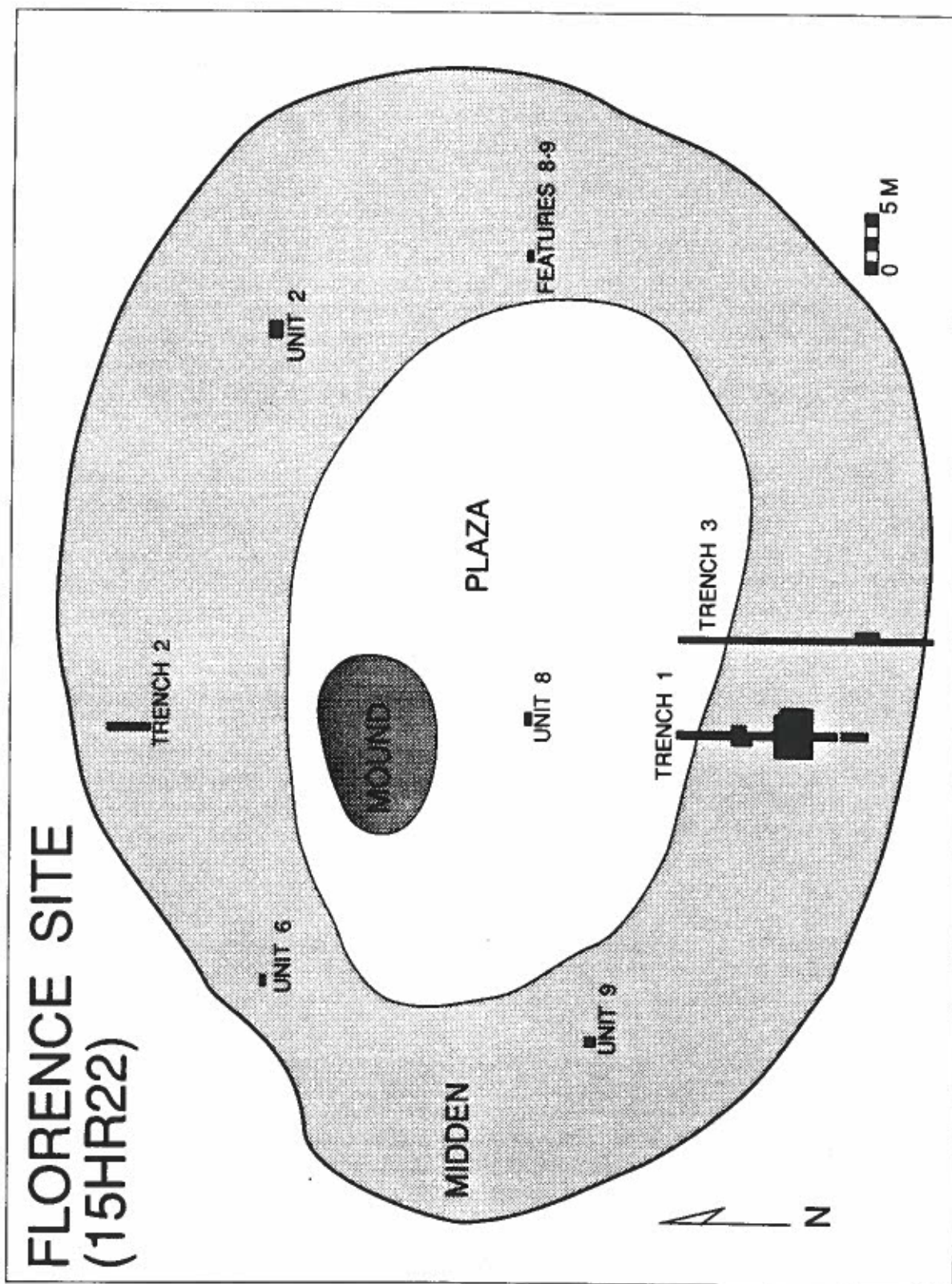


Figure 3. Planview of Site 15HR22.

Exterior surface treatment could not be determined for 32 sherds. Of the remaining specimens, 73.3 percent were classified as Jessamine Cordmarked, 22.4 percent as Jessamine Plain, and 4.3 percent as Jessamine Knot Roughened (Sharp and Pollack 1992.). The most common exterior surface colors are light brown, dark brown, light gray, and black, while the most common interior surface colors are dark brown, black, and light brown (Table 2). A majority of the rims that could be oriented are direct, but 31.1 percent are slightly outflaring and 9.7 percent are inslanted (Figure 4). More than 50 percent of the lips are flat, but rounded and pointed lips are well represented.

Ceramics from Site 15Hr22 are tempered with a shell and limestone (48.4 percent), shell (47.1 percent), or limestone and shell (4.5 percent). Some specimens are well-fired and temper particles are quite small, while others are not as well-fired and contain very large temper particles including parts of mussel hinges. Most of the limestone fragments are very small, and in mixed tempered sherds they often account for a small percentage of the overall observed temper. Manganese concretions are quite common in all sherds, and the holes left by these concretions were often difficult to distinguish from those left by eroded limestone fragments.

Decoration consists of notched, incised, cordmarked, knot roughened, or smoothed-over cordmarked impressions on vessel lips; applied clay strips just below the rim; incising on vessel necks; or incising and punctations on vessel necks (Table 2). The clay strips consist of a narrow band of clay attached 2 to 5 mm below the rim. Four of the clay strips are plain and one is notched. Almost two-thirds of the incising represents rectilinear designs. Curvilinear designs or a combination of rectilinear and curvilinear designs also are present (Figures 5-6). Punctations were observed on two specimens.

Appendages include thin strap, thick strap, and loop handles as well as simple U-shaped lugs (Table 2). All of the loop handles have parallel sides, but most of the thick and thin strap handles have triangular shapes. Some of the loop and thick strap handles, but none of the thin strap handles, are associated with single or double ears that extend above the lip. The upper portion of all handles is attached to the vessel lip, while the lower portions of several specimens are riveted to the wall of the vessel. The thinnest part of the U-shaped lugs was attached to the lip, with the thickest part located below the lip.

Lithics

A total of 1,829 lithic artifacts greater than 12.7 mm were recovered from 15Hr22. Of these, 98 are chipped stone tools and 1,731 are flakes, shatter, or core fragments. Tools include bifaces, drills, and projectile points (Table 3). A variety of groundstone artifacts also were recovered.

The biface category includes items representing various stages of the lithic reduction sequence as well as finished tools. Most of the thick bifaces are blanks or preforms, but one appears to be a chopping tool. Edgewear observed on several thin bifaces suggests that they represent cutting tools or knives. One of these specimens is a slightly shouldered triangular biface that is nearly identical to specimens referred to by Converse (1973:70) as Fort Ancient knives. Another is a thick, pick-like biface (Figure 8v) whose function could not be determined. This biface is similar to specimens recovered from the early Fort Ancient Osborne phase sites of Dry Run (15Sc10) (Sharp 1984:107) and Muir (15Js86) (Turnbow and Sharp 1988:202).

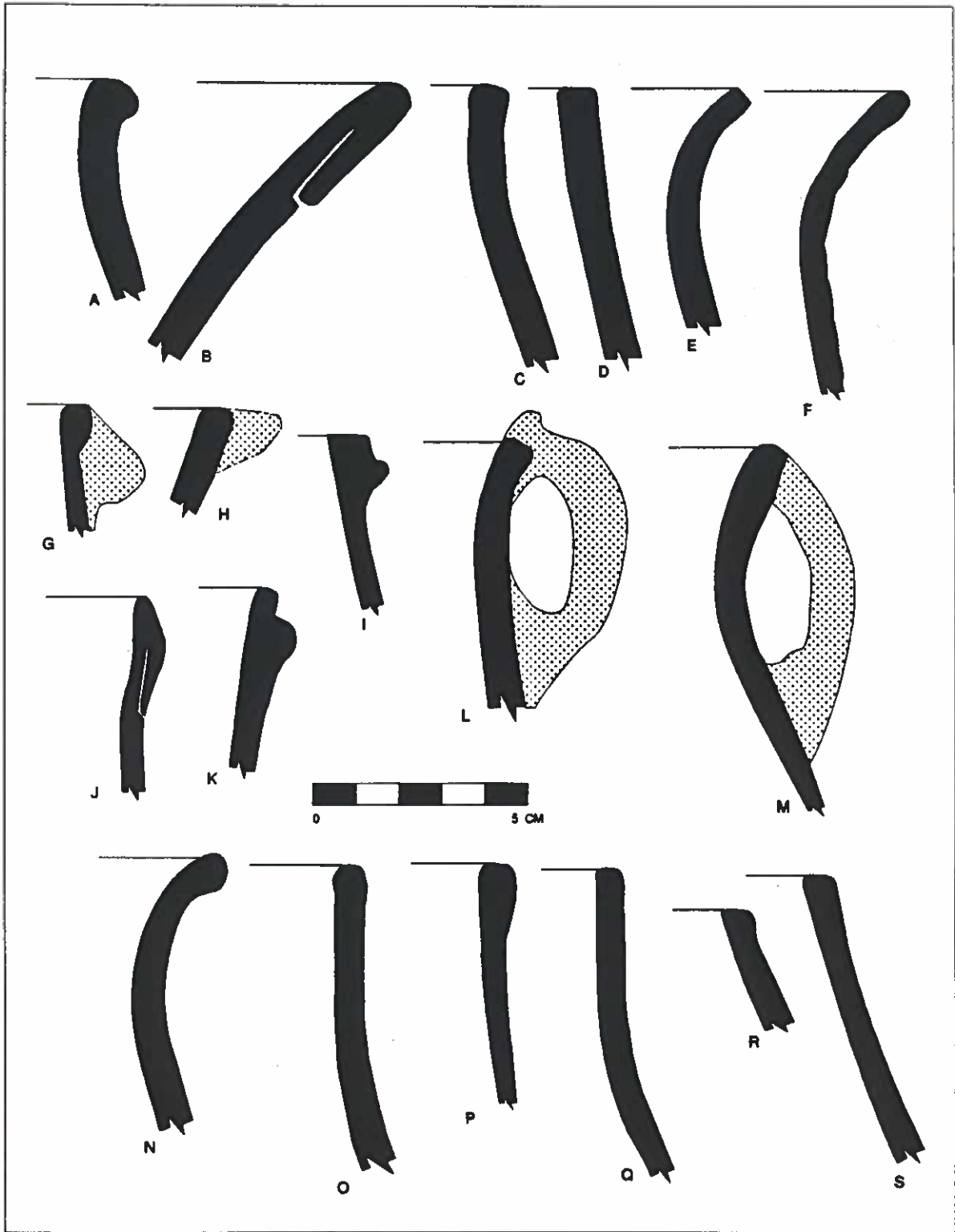


Figure 4. Rim profiles: a-b, Jessamine Knot Roughened; c-i, Jessamine Plain; j,k,m-s, Jessamine Cordmarked.

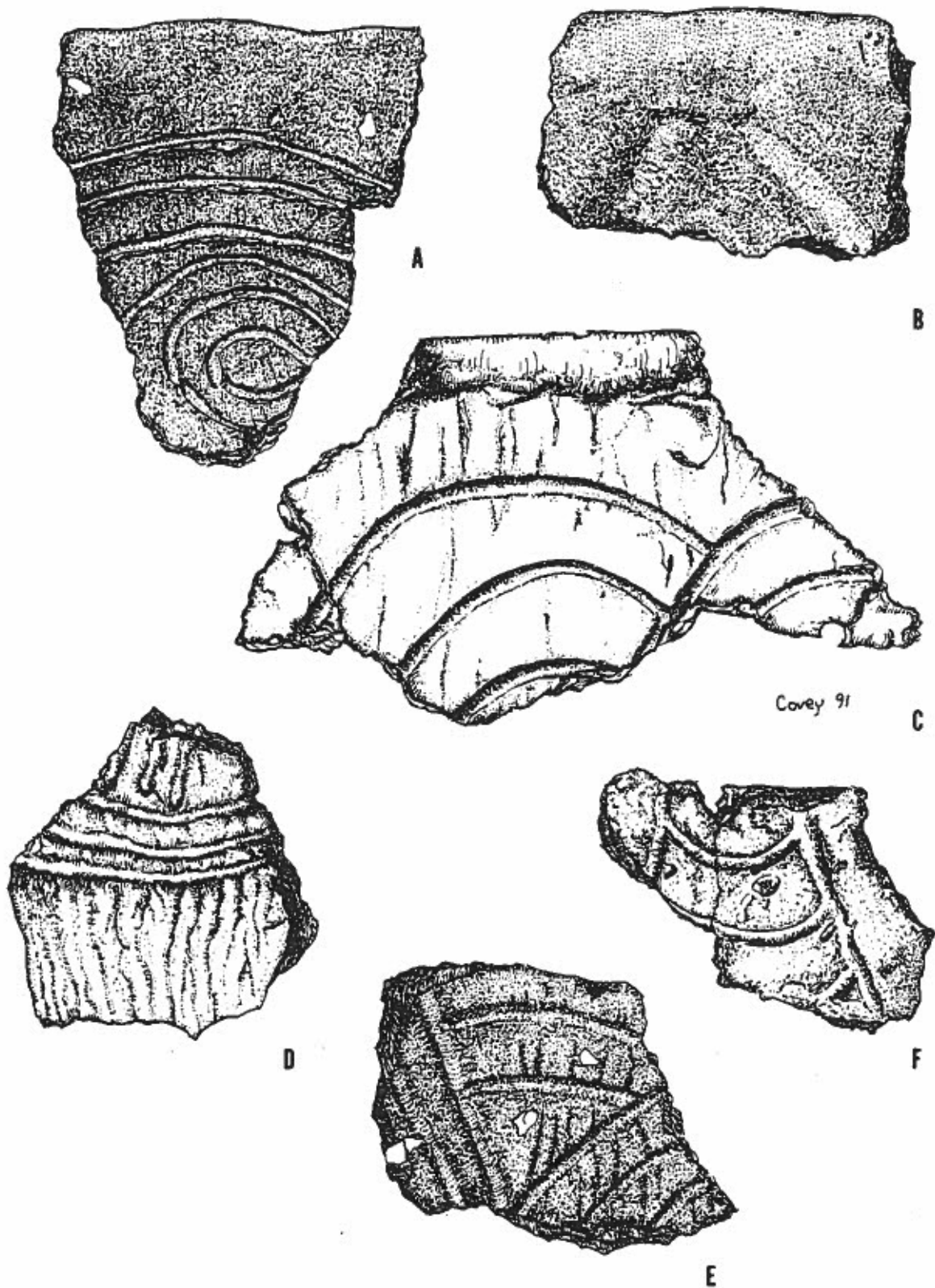


Figure 5. Site 15Hr22 incised ceramics: a,b, plain exterior surface; c-f, smoothed-over cordmarked exterior surface (shown actual size).

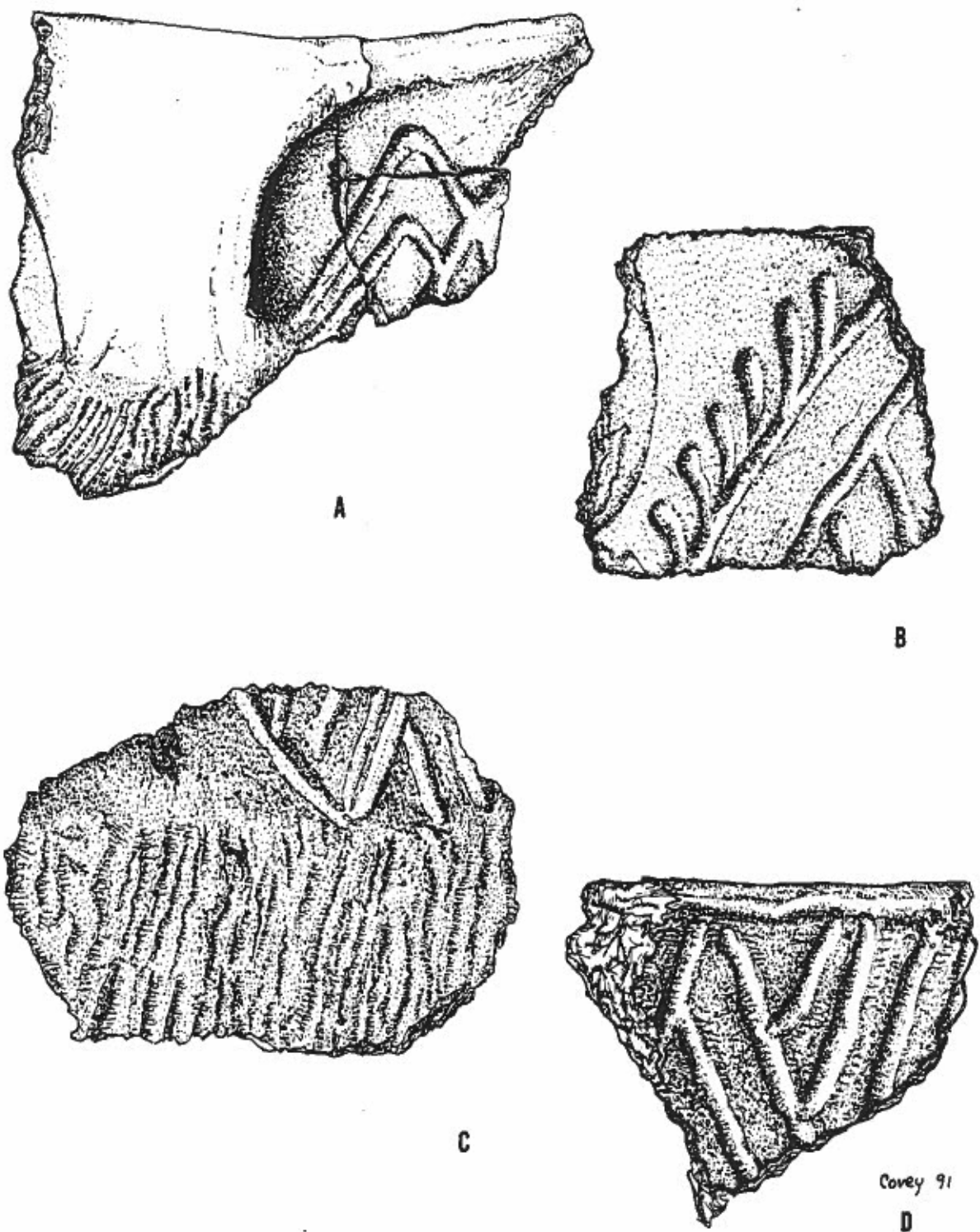


Figure 6. Site 15Hr22 incised ceramics: a-d, plain exterior surface (shown actual size).

Five of the six drills are small and spike-shaped (Figure 7o-t). The remaining specimen is a fragment of an expanded base drill (Figure 7u). Similar drill styles have been reported from other Fort Ancient sites in the region (Turnbow et al. 1983).

The morphology of the two unifacial scrapers and the six nontriangular projectile points suggests they are not products of the Fort Ancient occupation of Site 15Hr22. Except for a Chesser Notched-like (Justice 1987:213) projectile point recovered from a refuse pit, all of the unifacial scrapers and the nontriangular points were recovered from the surface or plowzone. As at Site 15Hr21, these materials may represent a minor pre-Fort Ancient component or they may have been transported to the site by Fort Ancient people who found them in nearby agricultural fields.

Based on gross morphological attributes, the triangular projectile points were divided into three groups. The first group consists of nine Crude Triangulars (Railey 1992:153-154). These points, which exhibit crude chipping, no edge retouch, and thick cross-sections, may represent unfinished triangular points. The second group of triangular projectile points (n=7) have serrated lateral margins (Figure 7c,d) and are similar to Type 3 Fine Triangular points (Railey 1992:158). As previously noted, this projectile point style is primarily known from Fort Ancient contexts that date from A.D. 1200 and 1400 (Railey 1992:158).

The remaining 14 triangular projectile points (Figure 7g-n) are isosceles triangles that are similar to Type 5 Fine Triangular (Railey 1992:161-163) as well as Madison Triangular (Justice 1987) projectile points. Although not particularly diagnostic, in the middle Ohio Valley these types of points are somewhat more common at sites that were occupied after A.D. 1400 than those occupied before that date.

Groundstone artifacts found at Site 15Hr22 include 11 chipped limestone disks, two pitted stones, a siltstone discoidal fragment, and a siltstone elbow pipe. Chipped limestone disks (Figure 8) are diagnostic of the middle Fort Ancient period in the Central Bluegrass region, although little is known about their function (Pollack and Hockensmith this volume; Turnbow 1992:179). They have not been recovered from Osborne phase sites in the Central Bluegrass nor were any found at the early Madisonville horizon Capitol View Site (Henderson this volume). The chipped limestone disks have an average diameter of 6.5 cm.

The centrally perforated, biconcave, incised siltstone discoidal is very similar to specimens found at Fox Farm (15Ms1) (Turnbow 1992:175). As with serrated triangular projectile points, these types of artifacts primarily have been recovered from middle Fort Ancient contexts. The same cannot be said for siltstone elbow pipes, which are common throughout the Fort Ancient sequence.

Botanical Remains

A total of 128 liters of soil was floated and analyzed from Site 15Hr22. Hickory and white oak account for about two-thirds of the wood charcoal (Table 7) (Rossen 1992b). The Site 15Hr22 nutshell collection is dominated by black walnut and hickory. Cultigens are represented by maize and beans, while sumac dominates the wild seed collection (Table 7). Except for chenopod (*Chenopodium* spp.) (Rossen 1992a; Wagner 1987), starchy-oily seeds of the Eastern Agricultural Complex (e.g., maygrass [*Phalaris caroliniana*]) were not recovered from Site 15Hr22.

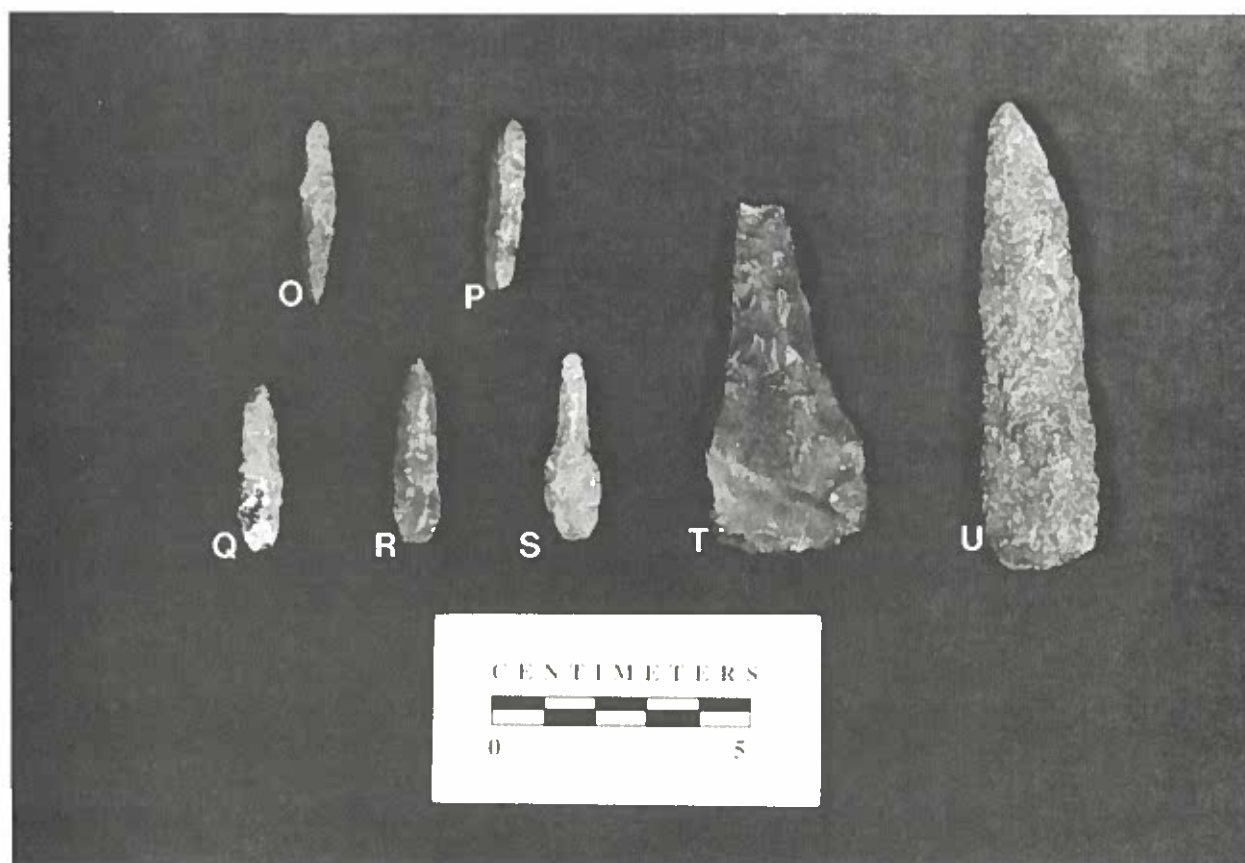
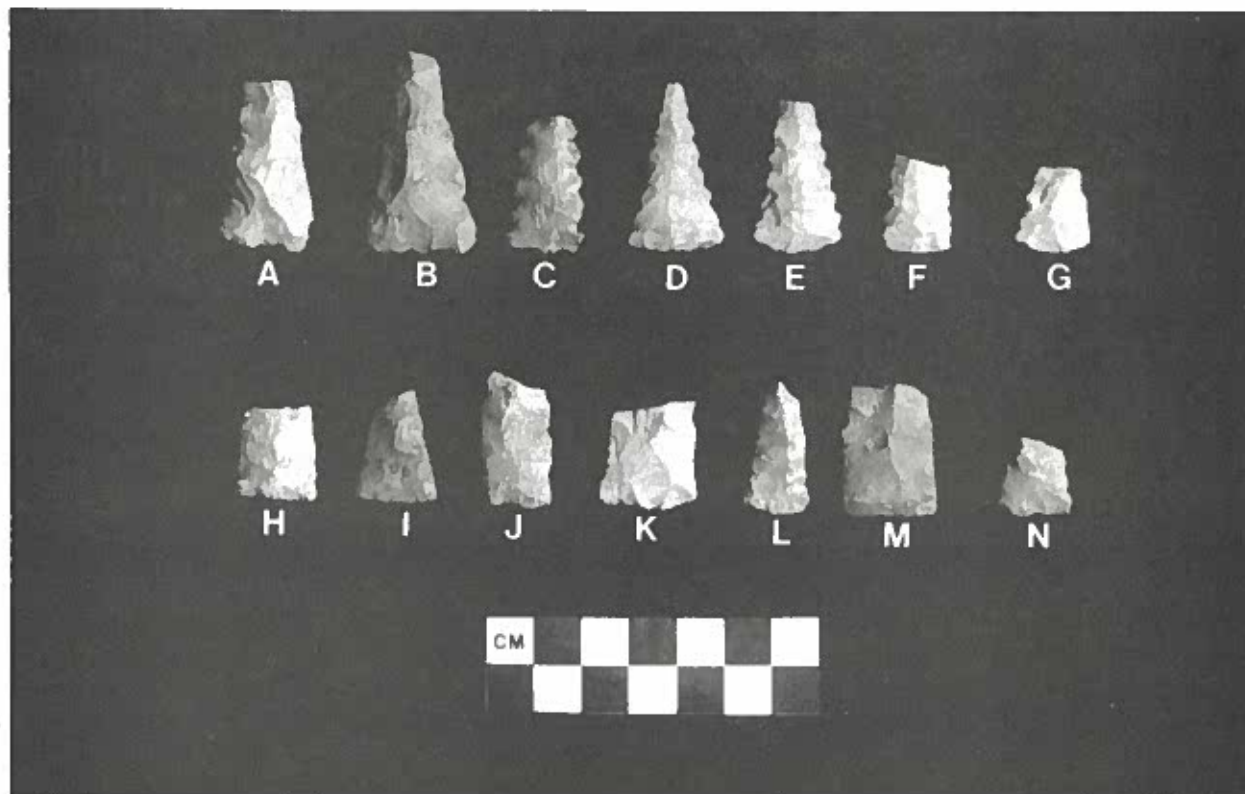


Figure 7. Chipped Stone Tools: a,b, Crude Triangular projectile points; c-e, Type 3 Fine Triangular projectile points; g-n, Type 5 Fine Triangular projectile points; o-s, spiked drills; t, expanded base drill; u, pick-like.



Figure 8. Chipped limestone disks.

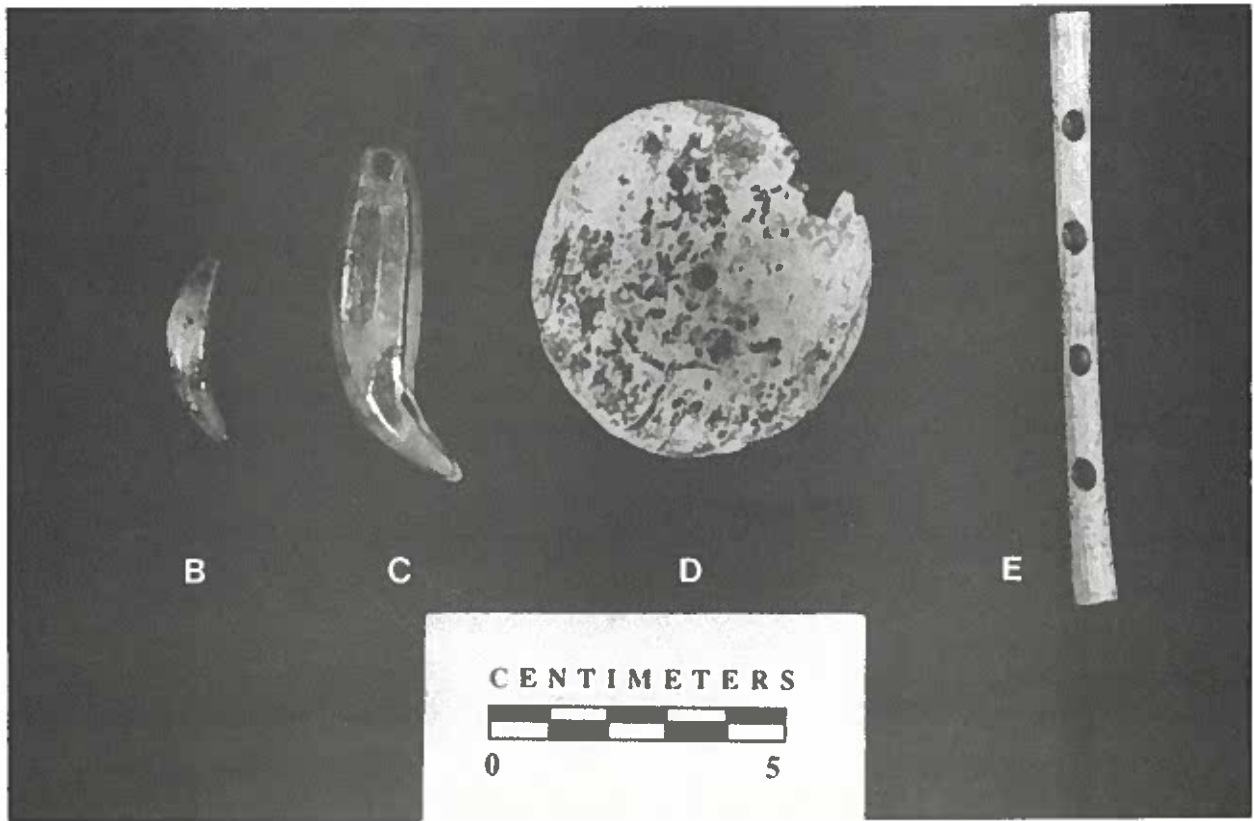
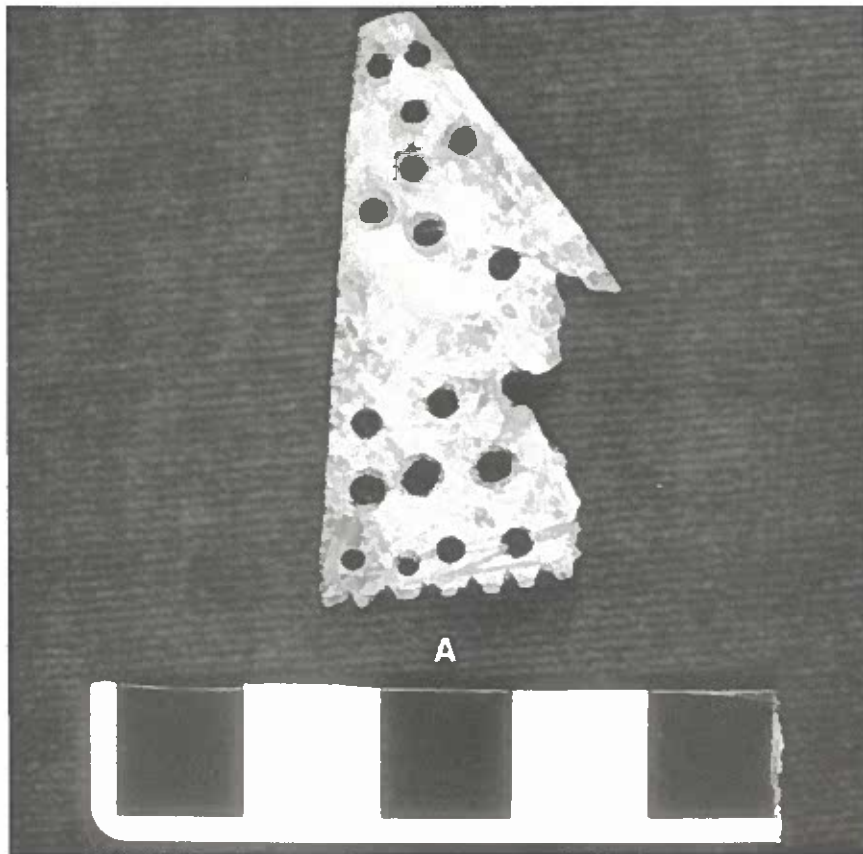


Figure 9. Bone and shell artifacts: a, bone pendant or hair spreader; b-c drilled canines; e, bone flute or whistle; d, plain circular shell gorget.

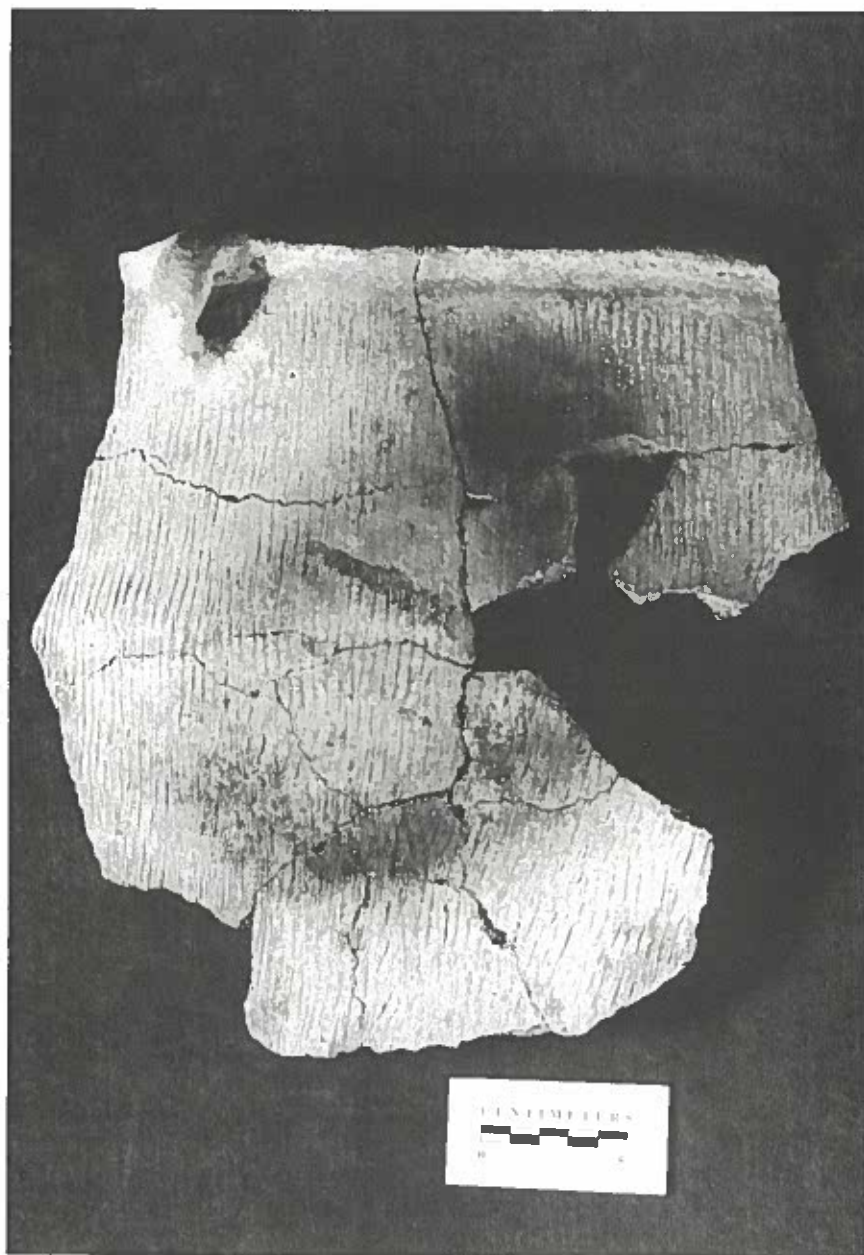


Figure 10. Portion of large ceramic jar from Structure 1.

Table 7. Site 15HR22 Botanical Remains.

	Frequency	Percent*	Gram Weight	Percent*
Wood Charcoal				
Hickory (<i>Carya</i> spp.)	2235	41.2	29.9	37.6
White oak (<i>Quercus</i> spp.)	1435	26.5	20.5	25.8
Black walnut (<i>Juglans nigra</i>)	626	11.6	9.0	11.3
Black locust (<i>Robinia pseudoacacia</i>)	481	8.9	7.7	9.7
Honey locust (<i>Gleditsia triacanthos</i>)	438	8.1	9.3	11.7
American elm (<i>Ulmus americana</i>)	105	1.9	1.7	2.1
Maple (<i>Acer</i> spp.)	46	0.8	0.6	0.8
Slippery elm (<i>Ulmus rubra</i>)	32	0.6	0.5	0.6
White ash (<i>Fraxinus americana</i>)	21	0.4	0.4	0.5
Total identified wood charcoal	5419	100.0	79.6	100.1
Unidentified wood charcoal	5932		68.9	
Bark (general)	224		2.8	
Nuts				
Black walnut (<i>Juglans nigra</i>)	2217	50.6	109.5	68.1
Hickory (<i>Carya</i> spp.)	1900	43.4	46.0	28.6
Butternut (<i>Juglans cinerea</i>)	13	0.3	2.1	1.3
Hazelnut (<i>Corylus</i> spp.)	1	0.0	0.0	0.0
Acorn (<i>Quercus</i> spp.)	6	0.1	0.0	0.0
Juglandaceae	241	5.5	3.2	2.0
Total	4378	99.9	160.8	100.0
Tropical Cultigens**				
Corn				
Kernels	259	39.8	3.5	31.5
Cupules	316	48.5	5.1	45.9
Beans				
Complete	21	3.2	1.5	13.5
Fragments	55	8.4	1.0	9.0
Total	651	99.9	11.1	99.9
Seeds				
Sumac (<i>Rhus</i> spp.)	96	69.6		
Chenopod (<i>Chenopodium</i> spp.)	22	15.9		
Knotweed (<i>Polygonum</i> spp.)	3	2.2		
Plum (<i>Prunus</i> spp.)	3	2.2		
Grape (<i>Vitis</i> spp.)	2	1.4		
Grass (Graminae)	2	1.4		
Pawpaw (<i>Asimina triloba</i>)	1	0.7		
Poke (<i>Phytolacca</i> spp.)	1	0.7		
Unidentified	8	5.8		
Total	138	99.9		
* Calculated to nearest 0.1 percent				
** All flotation-recovered remains except for 5 beans and 3 plum seeds.				

Two aspects of the Site 15Hr22 botanical collection are somewhat unusual: 1) nutshell accounts for a much higher percentage of the plant remains than at other Kentucky Fort Ancient sites and 2) sumac is unusually abundant. Although the density of nutshell at Site 15Hr22 is rather high, the density of corn is consistent with densities recorded for other Fort Ancient sites (see page 175). The high nutshell density, as well as the large number of sumac seeds suggests a greater reliance on these secondary food sources than has been documented for other Kentucky Fort Ancient sites. Perhaps during periods of subsistence stress caused by reduced yields of cultivated plants or a decrease in the availability of game, the inhabitants of Site 15Hr22 turned to secondary plant food resources such as nuts and sumac.

Faunal Remains

A sample of 6,410 faunal remains from eight features (six pits and two structures) was analyzed from Site 15Hr22 (Table 8) (Tune 1992a). Four classes of vertebrates were identified in the assemblage. Of these, 66 percent are mammal, 15 percent are bird, 9 percent are reptile, and 9 percent are fish. Approximately 1 percent of the remains could not be assigned to a specific taxon.

In general, the Site 15Hr22 faunal exploitation pattern is similar to that documented for other Kentucky Fort Ancient sites (Breitburg 1988, 1992; Tune 1987). Animal exploitation focused on three large mammals (deer, elk, and bear) supplemented by a variety of avian (primarily wild turkey), reptilian (primarily box turtles) and fish species (Table 10). The pattern documented at this site differs, however, from other Kentucky Fort Ancient sites in that fish remains account for almost 10 percent of the collection. At other Kentucky Fort Ancient sites, fish accounts for no more than 6 percent of the collection and can make up as little as 1.1 percent or 1.4 percent. As with the increased use of nuts and sumac, a greater reliance on fish may reflect an increased emphasis on secondary foods due to subsistence stress.

A wide range of work bone and shell artifacts were recovered from Site 15Hr22 (Table 9). In addition to the materials presented in Table 9, 66 specimens represent the debris from antler tool manufacturing. Except for an a possible emphasis on antler tool manufacturing, the worked bone and shell artifacts identified in the Site 15Hr22 collection are similar to those recovered from other Middle Fort Ancient sites (Henderson et al. 1992).

Molluscs (Table 10) recovered from Site 15Hr22 represent species from a mid-sized permanent stream with good water quality and riffle-pool environment. The presence of Quadrula cylindrica is of some interest since at present this species is only known from the Tennessee River and the Red River in western Kentucky.

Table 8. Identified and Unidentified Vertebrate Remains from Site 15Hr22 by Taxonomic Class.

Class	Number of Identified Elements	Percent of Identified Elements	Number of Unidentified Elements	Total	Percent of All Elements
Vertebrate	--	----	74	74	1.1
Mammal	384	60.8	3870	4254	66.4
Bird	64	10.1	871	935	14.6
Reptile	97	15.3	471	568	8.9
Fish	87	13.8	492	579	9.0
Total	632	100.0	5778	6410	100.0

Table 9. Worked Bone and Shell Artifacts.

	Frequency
Worked Bone	
Antler projectile points	15
Antler flaker or drift	1
Gouge (large mammal)	1
Splinter awls (bird)	5
Awls (mammal)	4
Bone beads	
bird	5
small mammal	1
Drilled canine teeth (Figure 9b,c)	
bear	1
dog	1
Pin	1
Counter (bird)	1
Flute (bird) (Figure 9e)	1
Flute preform (bird)	1
Bone pendant or hair spreader (Figure 9a)	1
Cup or bowl fragment (turtle shell)	1
Total	40
Worked Shell	
Beads (marginella)	5
Gorget or earring (Figure 9d)	1
Total	6

Table 10. Summary of Identified Vertebrate Remains and Molluscs from Site 15Hr22.

Vertebrate Taxon	Frequency	MNI
Mammals		
Cervidae, Deer/Elk	21	
<u>Odocoileus virginianus</u> , White-tailed deer	225	17
<u>Cervus canadensis</u> , Elk	18	2
<u>Lynx rufus</u> , Bobcat	2	1
<u>Procyon lotor</u> , Raccoon	12	1
<u>Ursus americanus</u> , Black bear	4	1
<u>Canis cf. familiaris</u> , Domestic dog	1	1
Rodentia, Rodent	3	
<u>Castor canadensis</u> , Beaver	3	1
<u>Cricetidae</u> , Rats/Mice	4	
<u>Sciurus</u> , spp., Squirrel	44	
<u>Sciurus niger</u> , Fox squirrel	4	2
<u>Sciurus carolinensis</u> , Gray squirrel	20	
<u>Marmota monax</u> , Woodchuck	2	1
<u>Tamias striatus</u> , Chipmunk	2	1
<u>Sylvilagus floridanus</u> , Cottontail rabbit	1	1
<u>Scalopus aquaticus</u> , Common mole	1	1
Birds		
<u>Meleagris gallopavo</u> , Wild turkey	64	
<u>Ardea herodias?</u> , Great blue heron	1	1
Reptiles		
<u>Trionyx spiniforus</u> , Spiny softshell turtle	2	1
<u>Terrapene carolina</u> , Box turtle	70	8
<u>Chelydra serpentina</u> , Snapping turtle	13	2
<u>Chrysemys</u> spp., Slider/Cooter	1	1
Serpentes, Snake	4	
Fishes		
Catostomidae, Suckers	6	
<u>Moxostoma cf. carinatum</u> , River redhorse	2	1
<u>Pomixis</u> , spp., Crappie	1	1
Ictaluridae, Catfish	1	
<u>Ictalurus punctatus</u> , Channel catfish	4	1
Centrarchidae, Sunfish	2	
<u>Aplodinotus grunniens</u> , Freshwater drum	11	1
<u>Lepisosteus osseus</u> , Longnose gar	63	1
Percidae, Perch (sauger)	1	
Total Identified Vertebrates	613	
Molluscs		
<u>Amblema plicata</u> , Three ridge	13	
<u>Cyclonaias tuloerulate</u> , Purple warty-back	1	
<u>Lampsilis ventricosa</u> , Pocketbook	4	
<u>Eliptio dilatatus</u> , Spike	4	
<u>Pleurobema sintoxia</u>	1	
<u>Lampsilis fasciol</u>	1	
<u>Quadrula cylindrica</u> , Rabbits foot	1	
Total	24	

FEATURES

Features encountered at this site consist of pits, oxidized or fired areas, structures, and burials.

Pits

Pit features (n=18) range in diameter from 50 cm to 2.0 m, with a mean of 1.23 m, and have an average depth of 22.7 cm below the plowzone. These types of features tend to be located between the structures and the outer edge of the concentric midden zone. Most are large, shallow basins that were used for the disposal of trash. Large bell-shaped pits, which are common on many Fort Ancient sites north of the Ohio River (Seeman 1986), were not found at Site 15Hr22. However, the contents of the basin-shaped features at Site 15Hr22 is similar to that of large bell-shaped pits, indicating that though their initial functions may have differed, both types of pits eventually served as trash disposal facilities.

Oxidized Areas

Oxidized features (n=3) are definable areas of compact, bright red soil. All three were identified at the base of the plowzone. They range in diameter from 30 to 65 cm, are thin in cross-section (10 to 15 cm thick), and contain relatively few artifacts. These features are the result of very intense or prolonged burning, undoubtedly associated with surface fires or shallow hearths.

Structures

Several isolated postmolds (n=8) and three structures were investigated at Site 15Hr22. Postmolds range in diameter from 7 to 22 cm with a mean diameter of 13.3 cm. Some postmolds were chinked with small limestone rocks.

Structures at Site 15Hr22 appear to have been constructed in a shallow to fairly deep rectangular basin. The basin may have provided additional footer support for structure walls and may have helped to minimize drafts. All of the structures had hard packed floors that had been burned or baked in places. These structures also lacked large internal support posts that are usually associated with gabled roofs, and the absence of daub suggests that wattle and daub house construction was not common within this community. Compared to early Fort Ancient basin-shaped structures, those at Site 15Hr22 are larger and reflect greater energy expenditure in the form a prepared floor and larger posts.

Of the three structures examined at the site, only Structure 1 was completely excavated. It was rectangular and measured approximately 4 by 5 m, with the long axis oriented horizontally to the plaza (Figure 11). The basin increased in thickness from south to north or towards the central area of the site. Individually set posts, which ranged in diameter from 5 to 10 cm and extended to a depth of approximately 10 cm below the floor of the structure, lined the edge of the house basin. Some of the posts in the southwest corner of the structure had been chinked with rocks. The floor of this house was very compact, and in some places a considerable amount of ash had been pressed into it. This structure lacked an internal hearth.

A variety of objects were found on the floor of Structure 1 (Figure 11). A large antler rack, from which most of the tines had been removed, was documented near the structure's northern wall, and several scored antler tines were found on the floor west of the rack. A section of charred fibers of a reed or broad-leaf grass interwoven with larger twigs was found to the west of the antler rack. These materials may represent a portion of a collapsed house wall. Below these materials was a deer scapula hoe. A portion of a large ceramic vessel was recovered along the east wall, and over 15 ceramic disks were recovered from within or directly adjacent to the north wall.

Structure 2 measured at least 4.2 m long and was set in a basin that ranged from 5 to 20 cm in thickness. As with Structure 1, the basin increased in depth from south to north. The floor of this structure, which was bisected by a 1 m wide trench, was not as compact as the floor of Structure 1. Little in the way of artifactual materials was found on the floor of Structure 2.

Unlike structures 1 and 2, which lacked wall-trenches, the posts associated with Structure 3 had been set in a trench. This trench appears to have been dug so that large limestone slabs could be used to provide support for the posts that been placed within the soft matrix of a large pit feature. The size of Structure 3 is not presently known, and only a few large sherds were found in association with the floor of this structure.

Burials

Five burials were encountered during investigations at Site 15Hr22. Of these, four were excavated. Three contained human remains (Porter and Powell 1992). Burial 1 consisted of a child approximately three years old, who had been interred within a small basin-shaped pit. This pit, had a diameter of 60 cm and a depth of 18 cm, was situated adjacent to a concentration of refuse pits. Burial 1 had been placed in a fetal position oriented southeast-northwest, with its head facing the southwest. No grave goods were associated with Burial 1.

In contrast to the other burials documented at this site, Burial 2 had not been placed within a distinct burial pit. Rather, this infant, who was approximately 6 months old when death occurred, had been interred within the upper portion of a large refuse pit. The orientation of this individual could not be determined. Several shell beads were found in association with Burial 2.

Unlike burials 1 and 2, which were interred within or adjacent to several large refuse pits, Burial 3 was located in an area between the domestic structures and the central area. The pit within which this 16-17 year old had been interred measured 1.95 m in length and 70 cm in width and had a depth of 47 cm. This individual had been placed in an extended position with its arms laid across its chest. It was oriented east-west, with the head facing up. Several small limestone slabs had been placed over the chest area of Burial 3, and a lens of ash and carbonized wood charcoal was identified just above the limestone slabs. No grave goods were found in association with this individual.

A somewhat smaller oblong pit (1.65 m long, 50 cm wide, and 40 cm deep) excavated next to Burial 3 did not contain any human skeletal remains. Designated Burial 4, it appears to represent a pit within which an individual had been interred but whose remains had totally decomposed. Alternatively, this pit may have been dug in anticipation of an individual's imminent death, but for some reason was never used.

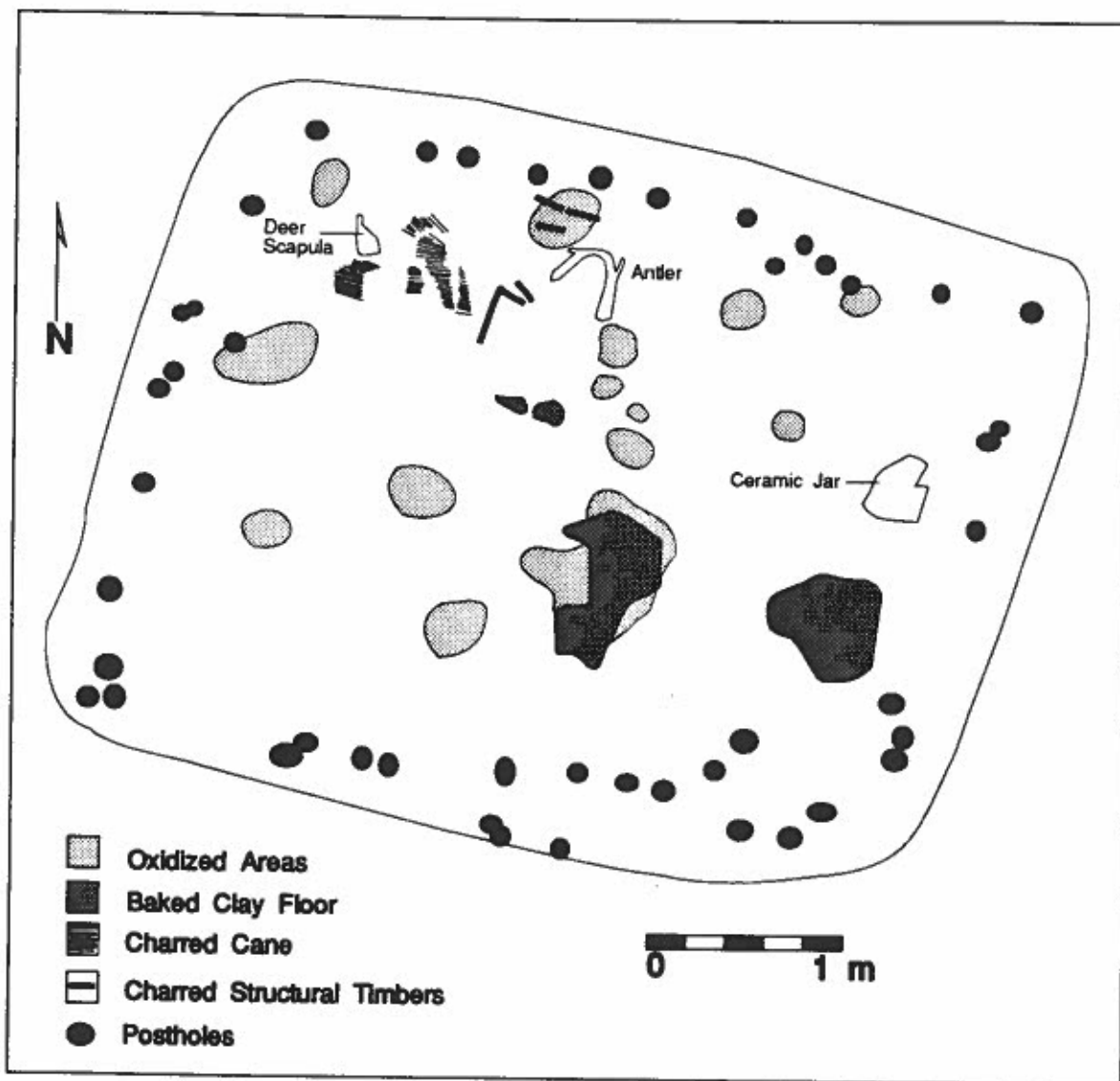


Figure 11. Structure 1.

Burial 5 is located just to the north of burials 3 and 4. Based on the shape of the exposed portion of the burial pit (40 cm long x 40 cm wide) and information obtained from soil cores, this burial pit appears to be oblong in shape and to contain the remains of an adult.

Individuals at Site 15Hr22 also were interred within a mound located at the interface of the central area and midden zone. However, no attempt was made during these investigations to excavate any of the burials interred within this mound.

Village Configuration

In this section, the general configuration of features within Site 15Hr22 is described and comparisons are made between areas 1 and 3. Rather than characterize each investigated area (Figure 4), the following discussion focuses on trenches 1 and 3 (Area 1) and Unit 2 (Area 3). Not surprisingly, these are the most intensively and extensively investigated localities within the ca. 30 m wide midden zone at Site 15Hr22.

In Trench 1 (Figure 12), a cluster of burials and features was located adjacent to the central area (plaza). It consisted of three burial pits, a large oxidized area, and two shallow pits. Very little in the way of artifactual materials was recovered from within or in the vicinity of the burials or features. Given their proximity to three burials, the oxidized area and small pit may have been associated with rituals performed during or after the dead were interred. The limestone slabs and ash and charcoal lens above the chest area of the 16-17 year old designated Burial 3 also may have been a product of mortuary rituals. Good evidence of feasting and mortuary rituals has been collected from the late Madisonville horizon Larkin Site (15Bb13) in Bourbon County (Pollack et al. 1987).

No features were identified between the mortuary zone and Structure 1, located 6 m to the south (Figure 12). Since structures within circular villages usually face the center of the community, this space may have been reserved for interactions with other members of the community and visitors and other activities that did not result in substantial subsurface features. The lack of features, such as hearths, in this area also may be due to subsurface plow disturbance or may reflect sampling biases. Although no features were found in front of Structure 1, pits containing large quantities of ash were found directly west and south of this structure. These pits presumably contained debris cleaned out of hearths.

Structure 1 was a basin-shaped house with a prepared clay floor (Figure 11). As noted previously, several objects, including a large portion of a ceramic vessel, ceramic disks, scored antler tines, an antler rack, and a deer scapula, were found within or adjacent to this structure. The size of the ceramic vessel found along the east wall suggests that it may have been used for storage. While the function of the ceramic disks is not presently known, it is worth noting that those associated with Structure 1 account for approximately 70 percent of the ceramic disks recovered from the site. Also, in comparison to the structures, only four ceramic disks were recovered from the 15 refuse pits investigated in areas 1 and 3. This suggests that these disks were used for household tasks conducted within or immediately adjacent to residential structures.

The recovery of the large antler rack and scored antler tines suggests that Structure 1 was a locus for the manufacture of antler projectile points. Additional antler racks lacking their tines were recovered from the pit features behind structures 1 and 2. In contrast, no antler racks were associated with the cluster of refuse pits in Area 3. The absence of antler racks in Area 3 suggests that antler projectile point manufacturing may have been restricted to certain areas of the village.

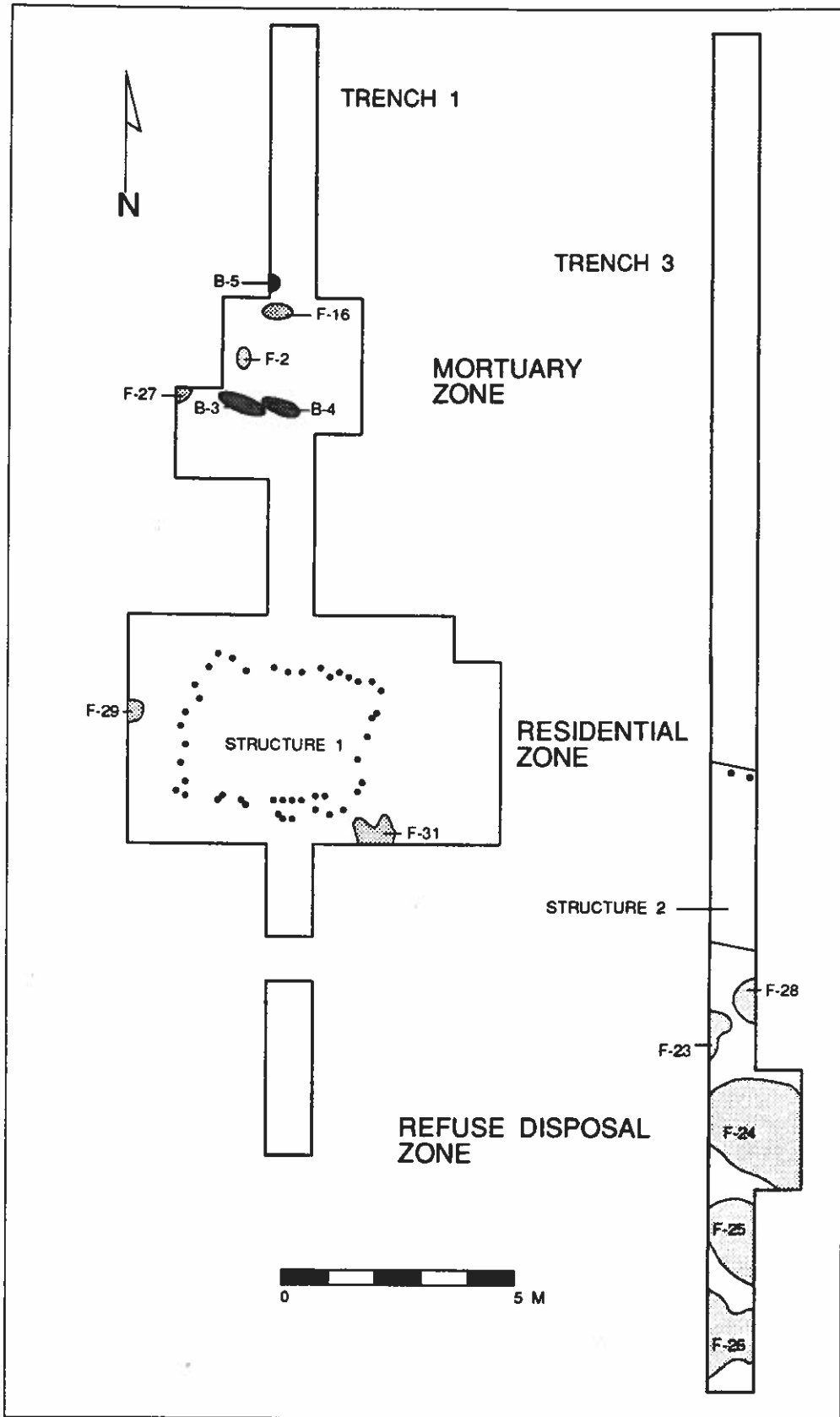


Figure 12. Area 1: Trenches 1 and 3.

Perhaps this was a group activity or was a task that required a specific expertise. Alternatively, the lack of antler racks in Area 3 maybe due to sampling biases.

In Trench 3 (Figure 13), no burials were identified between Structure 2 and the central area (plaza). However, unlike Trench 1, where no pits were encountered downslope from Structure 1, a line of five large trash-filled pits was encountered directly downslope from Structure 2 (Figure 12). A large quantity of ceramics and animal bones was recovered from these features, and most contained layers or pockets of ash from the cleaning of hearths.

Investigation of Area 3 was restricted to a cluster of pit features and two burials (Burials 1-2) (Figure 13). Except for an absence of antler racks, the contents of these features were very similar to those documented in Trench 3. Unlike Trench 3, however, where no burials were encountered within or adjacent to the refuse pits, a small child and an infant were recovered from Area 3 (Figure 13).

Based on these investigations, it appears that the Fort Ancient village at Site 15Hr22 was organized in the following manner. The central portion of the village was kept clean of debris and served as a central plaza for community events, rituals, and ceremonies. Around the plaza were three concentric rings: a mortuary zone, a residential zone, and a refuse zone. Individuals not interred within the burial mound or within the refuse disposal zone were buried in the mortuary area. The residential zone was a ring of basin-shaped houses and nearby domestic activity areas, while the refuse zone consisted of clusters of large basin-shaped pits. No evidence of a stockade was found in any of the trenches or units excavated at the site (Figure 3).

In general, the organization of Site 15Hr22 is similar to that documented for the SunWatch Site in southern Ohio (Heilman et al. 1990). Patterns identified at both sites include a circular arrangement of structures around a central plaza, a mortuary zone between the structures and the plaza, and the placement of infants and small children in refuse areas. However, at SunWatch, the primary refuse zone was situated between the mortuary and residential zones and not in back of the structures as at Site 15Hr22. Other traits that serve to distinguish the organization of these two sites is the absence of a burial mound and the presence of a stockade at SunWatch.

DEMOGRAPHIC AND TEMPORAL CONSIDERATIONS

Both of the sites that comprise the Florence Site Complex represent the remains of fourteenth century Fort Ancient villages that consisted of a circular arrangement of structures around a central plaza. However, Site 15Hr22 is about twice the size of Site 15Hr21 and appears to have been occupied for a longer period of time, based on a higher artifact density and darker midden stain.

Assuming that all of the structures at sites 15Hr21 and 15Hr22 were similar in size to Structure 1 at Site 15Hr22, were inhabited by six individuals, and were evenly spaced, an estimate of the population of each community can be derived. Using these parameters, 15 structures would have been present at Site 15Hr21, and it would have had a population of 90 people, while Site 15Hr22 would have had 25-30 structures and a population of 150 to 180 individuals. Although Site 15Hr22 is bigger and has a larger plaza than Site 15Hr21, the domestic occupation zone at each site has a width of ca. 30 m. This suggests that a similar range of activities (e.g., processing and discarding of plant and animal remains, cooking, eating, sleeping, and burial of the dead) were

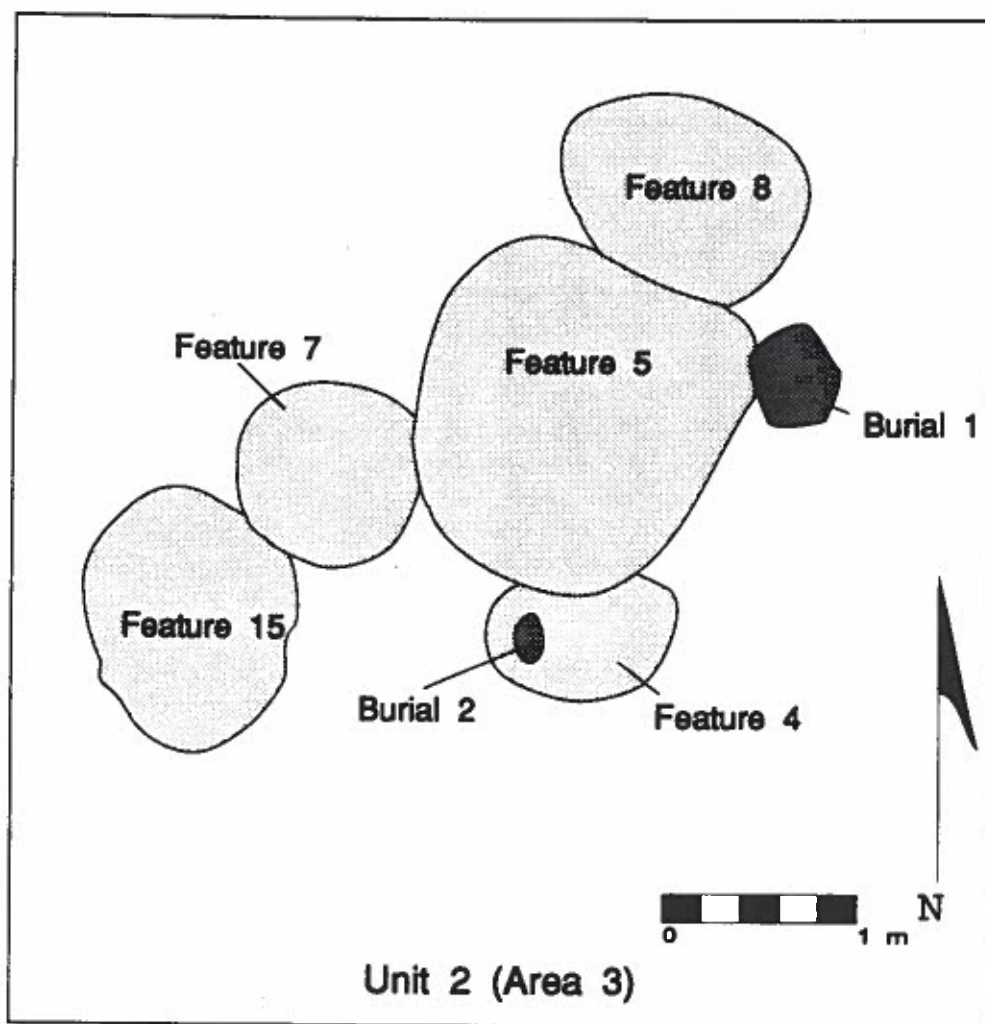


Figure 13. Area 3: Unit 2.

conducted within the domestic activity zones at both sites.

The cultural materials recovered from the Florence Site Complex and radiocarbon dates (Table 11) obtained from both sites suggest that sites 15Hr21 and 15Hr22 were occupied during the mid- to late A.D. 1300s. However, based on a comparison of the ceramics and, to a lesser extent the chipped stone tool assemblage, it can be suggested that Site 15Hr21 was occupied somewhat earlier than Site 15Hr22. Comparison of the ceramic collections from these two sites resulted in the identification of sufficient differences in exterior surface treatment, temper, and decoration to suggest that the two assemblages are not coeval. The Site 15Hr22 collection contains a higher percentage of Jessamine Plain specimens, shell temper, and decoration, and a lower percentage of Jessamine Knot Roughened sherds than the Site 15Hr21 collection (Table 1). Diagnostic chipped stone tools from 15Hr21 include three Type 2 Fine Triangular and one Type 3 Fine Triangular projectile points, while seven Type 3 Fine Triangular and 14 Type 5 Fine Triangular projectile points were recovered from Site 15Hr22.

Differences in exterior surface color also serve to distinguish the ceramic collections from these two sites. At both sites, light brown and dark brown sherds account for about half of each assemblage. But for Site 15Hr21, reddish brown, orange brown and reddish orange sherds account for almost 40 percent of the collection, while for Site 15Hr22, light gray, black, and dark gray account for almost 30 percent of the collection (Table 1). These differences suggest that the inhabitants of these sites either exploited different clay sources or used different technologies to fire their vessels.

In northeastern Kentucky, the end of the middle Fort Ancient Manion phase and the beginning of the early Madisonville horizon Gist phase is marked by an increase in plain surfaced ceramic vessels, the use of shell to temper ceramic vessels, exterior surface decoration, and Type 5 Fine Triangular projectile points, and a decrease in ceramic vessels with knot roughened exterior surfaces (Turnbow and Henderson 1992a). Based on a comparison of the Site 15Hr21 and Site 15Hr22 collections, similar trends appear to be present in central Kentucky and it can be suggested that Site 15Hr22 was occupied towards the end of the Elkhorn phase and the beginning of the Madisonville horizon.

SUMMARY AND CONCLUSIONS

Research at the Florence Site Complex (15Hr21 and 15Hr22) has generated new information on middle Fort Ancient material culture and village organization in central Kentucky. It also has led to the definition of the Elkhorn phase (A.D. 1200-1400) to denote the middle Fort Ancient period in the Central Bluegrass region. Many Elkhorn phase sites (e.g., Buckner, Guilfoil, Singer, and Goff Village) consist of a midden zone surrounding a central plaza (Sharp 1990a). (An exception to this pattern is the Carpenter Farm Site [see Pollack and Hockensmith, this volume].) At some of these sites (e.g., Goff and Singer) (Sharp 1990a), as with Site 15Hr22, some individuals were interred within a burial mound. A similar pattern has been identified for the Manion phase in northeastern Kentucky (Henderson et al. 1992).

The Florence Site Complex ceramic assemblage consists of Jessamine Cordmarked, Jessamine Plain, and Jessamine Knot Roughened. All of the identifiable vessels are jars with direct, slightly outflaring, or inslanting rims. Diagnostic lithic tools include Type 3 Fine Triangulars and chipped limestone disks.

The floral and faunal assemblages from the Florence Site Complex are consistent with those recovered from other Fort Ancient sites in the middle Ohio Valley (Breitburg 1992; Rossen 1992a; Tune 1987; Wagner 1987). There is a strong reliance on cultivated plants, such as corn and beans, supplemented by wild plants, such as nuts and sumac. Deer, bear, and elk provided most of the animal meat, with turkey, turtles, and fish also contributing to the diet. The Florence Site Complex subsistence profile is distinguished from other Fort Ancient sites by a higher nut density and a higher percentage of fish remains. Increased exploitation of these secondary resources may reflect the range of expected variation within Fort Ancient subsistence strategies, or it may indicate that the inhabitants of this site complex experienced periods of subsistence stress, which necessitated an increased reliance on secondary food sources.

Investigation of Site 15Hr22 also documented that this community consisted of concentric mortuary, residential, and refuse zones arranged around a central plaza. Adults and adolescents were interred within the mortuary zone. The hearths and shallow pits documented within this zone probably were used for mortuary rituals and ceremonies. However, while most individuals were interred within this zone, some people were placed in a mound or interred within the refuse zone. The placement of infants and small children in the upper portions of trash pits or in small pits within the refuse zone probably reflects a high infant mortality rate and suggests that these individuals had not yet become members of the community. The association of grave goods (e.g., shell beads) with one of these individuals may reflect, in part, their family's standing within the community or an aspect of Fort Ancient religious beliefs. Placement of some individuals in a burial mound suggests the existence of some degree of status differentiation within this Fort Ancient community. Thus at Site 15Hr22, an individual could be interred in a refuse zone, the mortuary zone, or in the mound, based upon his or her age and/or social standing in the community.

The habitation zone is marked by a band of basin-shaped houses. The floors of these structures were well-packed and some appear to have been prepared. Structure walls consisted of woven reeds or grasses interwoven with large twigs or sticks that may have been covered with bark, mats, skins, and possibly thatch. Besides providing shelter from the elements, structures were the locus of household tasks, such as the manufacturing of antler projectile points. The refuse disposal zone is marked by concentrations of large basin-shaped pit features. Debris from household activities associated with the processing of plants and animals was disposed of in these features, as were the contents of hearths located within or directly adjacent to houses.

Based on a comparison of the ceramic assemblages from sites 15Hr21 and 15Hr22, it has been suggested that Site 15Hr21 predates Site 15Hr22. If this is the case, the close proximity of these two communities, coupled with their nearly identical radiocarbon dates, suggests that the latter may represent a relocation of the residents of the former to accommodate an influx of new families. However, at present it is not known whether settlement shifted directly from Site 15Hr21 to Site 15Hr22 or if this locality was abandoned for a brief period of time.

ACKNOWLEDGEMENTS

Research at the Florence Site Complex was supported in part by a Federal Survey and Planning grant from the Kentucky Heritage Council to the senior author. An unusual aspect of this study was an interest on the part of the principal landowners, Mr. and Mrs. Virgil Florence, in not only the archaeological research activities but in the long-term preservation of the Florence Site Complex. They kindly granted us access to their property, and we appreciate their hospitality and interest in the preservation of these sites. We would also like to thank the field crew of Teresa Tune, Will Daley, and Gwynn Henderson, the laboratory crew directed by Julie O'Shaughnessy, and the many volunteers without whose assistance this project could not have been completed. The volunteers include Haidee Adams, George C. Arnold, Chris Begley, Warren C. (Covey) Brown, Samuel Bulchor, Carrie Burns, Matt Conrad, Peggy Davis, Denise N. Elswick, Jim Evans, Ricky Ewalt, Frank Force, Beth Helfrick, Jerry Lewis, Kim and Steve McBride, Leif Meadows, Kathleen Millhoff, Lonnie Napier, Claire M. Porter, Chris Richardson, Natalie Scott, Clair Sipple, Mike Shott, Adonis Spivey, Tom Sussenbach, Wenjian Wang and Mao, Rita Wehner, Jo Anne Wilson, Daxon Caudill, and Chris Pool (a key volunteer) and the members of his class (Bryant Evans, Will Holmes, Angelia Martin, David Schotz, and Chris Cox). In addition, the authors would like to thank Covey Brown for producing the artifact illustrations, Jack Rossen for analyzing the botanical remains, and Teresa Tune for analyzing the faunal remains, Mr. and Mrs. Bob Caudell for granting us access to the eastern portion of Site 15Hr22, Mr. Bob Barnes and Harrison County Rural Electric for providing a bucket truck for taking photographs of Structure 1, Claire M. Porter for analyzing the human remains, and Phil Foley for bringing the Florence Site Complex to our attention.