

# Currents of Change

Journal of the Falls of the Ohio Archaeological Society

Spring 2003, Volume 1, Number 1

*Cover: Fine example of a butterfly-style bannerstone. See Richard Lyon's bannerstone article, entitled "Atlatl Weights," this issue.*

*Photos not cited within are the property of Anne Bader, Sundeia Murphy, and Leslie Rumbley.*

Published by  
Falls of the Ohio Archaeological Society  
Copyright 2003  
All Rights Reserved

**Currents of Change** is published biannually in the spring and fall by the Falls of the Ohio Archaeological Society (FOAS). The FOAS is dedicated to legally and ethically promoting the exchange of information on the prehistoric and historic heritage of the Falls region among professional archaeologists, students, avocational archaeologists, Native Americans, collectors, professionals in other disciplines (historians, teachers, etc.), and other members of the interested public.

The FOAS publishes articles and news briefs primarily, but not exclusively, about the archaeology of the Falls of the Ohio River region. The Falls Region is centered at Louisville, Kentucky and includes the area within a hundred mile radius, encompassing north-central Kentucky and southern Indiana (see map on back cover). The subject matter of articles and news briefs may address either prehistoric or historic period subjects related to archaeology and the early history of this region. Articles or newsworthy items focusing on areas elsewhere in the Ohio River Valley may also be included.

Contributions by professionals, avocational archaeologists, students, and the interested public are welcomed. Authors wishing to submit papers for publication should contact the Editors at the FOAS website, [www.falls-society.org](http://www.falls-society.org), for details about the acceptable file submission and photo formats. Papers in proper file format on disc or CD may be mailed to Anne T. Bader at 3502 Grantswood Court, Louisville, Kentucky 40213. All submissions should be accompanied by a brief biographical note (150 words or less) about the author(s).

Subscription is by membership to the FOAS. Dues for Full membership are \$15.00 annually; dues for Family membership are \$20.00 annually. Lifetime membership is \$100.00. Student membership dues are \$10.00. Membership includes two journals a year, a monthly newsletter, and any miscellaneous papers published. To join the FOAS, register on-line at [www.falls-society.org](http://www.falls-society.org) or use the form at the back of this publication.

Back issues of this journal may be purchased and downloaded from the FOAS website for \$8.00 each.

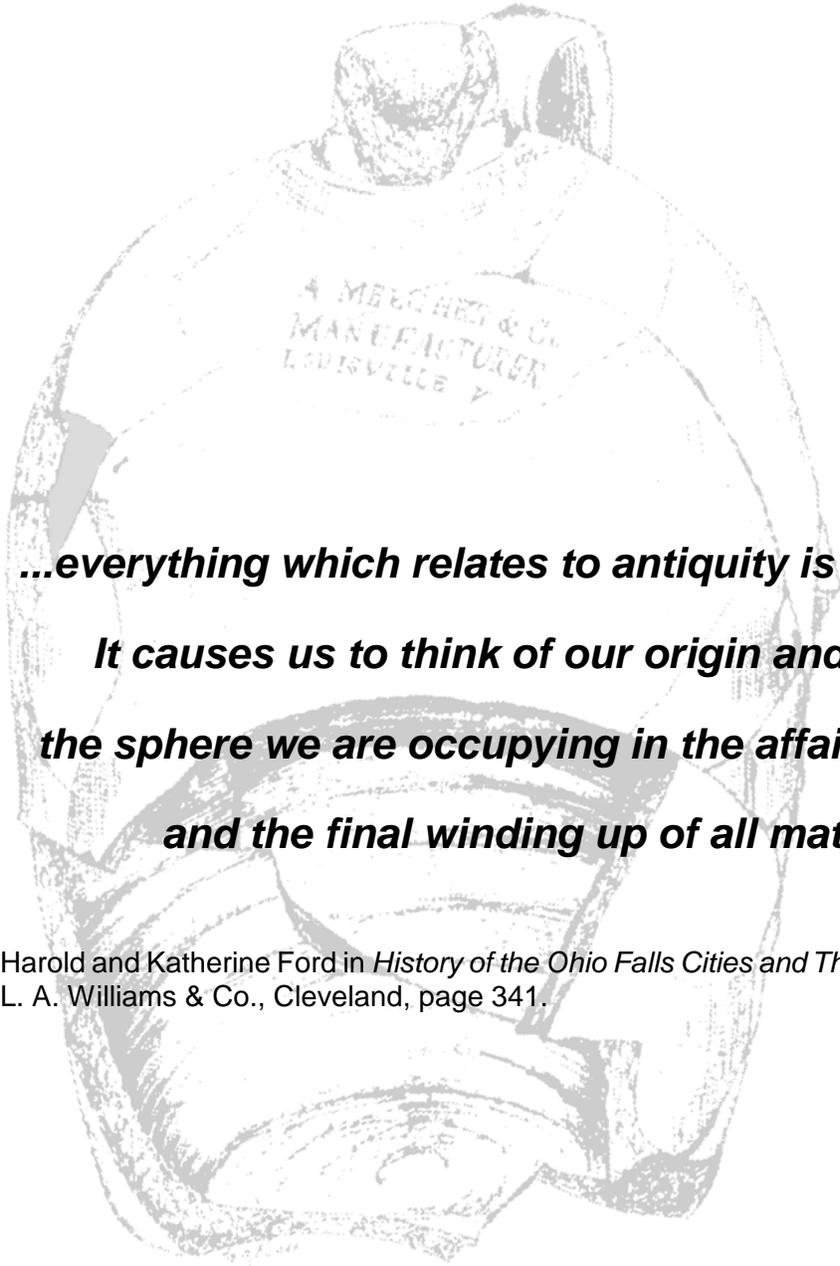
### FOAS OFFICERS

ANNE T. BADER, RPA.....	PRESIDENT
SUNDEA MURPHY.....	PRESIDENT-ELECT
TIM DARST.....	TREASURER
VALERIE MCCARTHY.....	SECRETARY

### FOAS EDITORIAL STAFF

Anne T. Bader, RPA, is a professional archaeologist with 24 years of experience in the Falls area. Formerly an archaeologist with the Louisville District Corps of Engineers, Ms. Bader currently directs a CRM group for AMEC Earth & Environmental, Inc. in Louisville, Kentucky.

Sundea Murphy has had 20 years experience in the chemical industry, specifically in the formulation, manufacturing, and customer applications of water-soluble and superabsorbent polymers. Presently, she holds a technical trainer position at UPS Supply Chain Solutions Group in Louisville, Kentucky.



***...everything which relates to antiquity is always interesting.***

***It causes us to think of our origin and of our destiny,  
the sphere we are occupying in the affairs of the universe,  
and the final winding up of all material things.***

Harold and Katherine Ford in *History of the Ohio Falls Cities and Their Counties*, 1882, published by L. A. Williams & Co., Cleveland, page 341.



## ABOUT THE CONTRIBUTORS

---

**Dr. Brian Adams** received his PhD from the University of Illinois. He is currently a Research Associate with the Public Service Archaeology Program at the University of Illinois at Urbana. He has worked in the Midwestern U.S., Europe, and the Middle East for more than 15 years and has supervised a number of archaeological survey and excavation projects. Dr. Adams research interests include lithic technology, use-wear analysis, hunter-gatherer settlement patterns, and Midwestern U.S. and European Paleolithics.

**Anne Bader** has been involved in the archaeology of the Ohio River Valley and the Falls area specifically since 1971. She received her B.A. in anthropology from the University of Louisville in 1974, and her M.A. in anthropology from the University of Kentucky in 1992. Ms. Bader has also completed Doctoral coursework at the University of Kentucky. In addition to work at these universities, she has worked professionally in three main positions. From 1990-1993, she served as Director for Archaeology Resources Consultant Services, Inc. (ARCS) in Louisville, Kentucky. She left that position to join the US Army Corps of Engineers, a position held until 2000, when she joined Ogden Energy and Environmental Services to start a CRM unit. This firm was purchased by AMEC Earth & Environmental, Inc. in 2001. Today, Ms. Bader directs a group of 20+ professional archaeologists and historians.

**Don Ball** has served the Louisville District of the U.S. Army Corps of Engineers for over 25 years. He earned his M.A. from the University of Tennessee. His professional interests are varied, and include folk architecture, tri-racial isolate research, firearms, historic archaeology, and more. Mr. Ball has co-authored several books about folk architecture from eastern Tennessee and Melungeon studies.

**Keith Keeney** is an archaeologist for the U.S. Army Corps of Engineers-Louisville District. He received his M.A. in Anthropology from the University of Memphis, with an emphasis on North American Archaeology. Mr. Keeney's professional experiences and research interests center mainly on the central Mississippi River Valley and the lower Ohio River Valley.

**Jan Marie Hemberger** has been an archaeologist with the U.S. Army Corps of Engineers, Louisville District for over 16 years, where she has obtained a wide variety of archaeological experience. She received both a B.A. and M.A. from the University of Louisville. Ms. Hemberger and her husband, professional archaeologist Phil DiBlasi, are both active with the Cave Research Foundation.

**Charles D. Hockensmith** received his B.A. and M.A. degrees in Anthropology from the University of Kentucky. For over 21 years, he has served as a staff archaeologist at the Kentucky Heritage Council in Frankfort.

**Richard Lyons** became interested in atlatls as a young boy and that led to a lifelong fascination with the prehistoric and historic record of their use. After retiring from the Clarksville Fire Department in 1999, he founded the Indiana Atlatl Association, an organization that sponsors public lectures and demonstrations of atlatl functions. He currently serves as President of the Atlatl Association and is on the Board of Directors for the World Atlatl Association. Mr. Lyons has a B.S. in Psychology from Indiana University Southeast.

**Valerie McCarthy** is a Registered Nurse and owns a business in Clarksville, Indiana that specializes in training nurses aides and in conducting healthcare classes. Ms. McCarthy considers herself an amateur, but archeology has been an interest for many years, and she has enjoyed taking Indiana University classes on the subject.

**Andrew White** received his B.A. in anthropology at Indiana University (1993) and his M.A. at Southern Illinois University at Carbondale (1999). He was a Staff Archaeologist at Glenn Black Laboratory of Archaeology from 1998-2002. In 2002, Mr. White began working at Indiana Purdue University, Fort Wayne. He is interested in social dynamics in small-scale societies, mathematical and statistical methods, Archaic/Woodland period settlement patterns and social formations, and geomorphology and formation processes. Currently, Mr. White is pursuing new concepts about Middle/Late Archaic settlement in the Ohio Valley.

## CONTENTS

---

<i>About the Contributors – Staff</i> .....	iv
<i>FOAS Monthly Meeting Guest Speakers – Staff</i> .....	vi
<i>Recent Archaeological Investigations at the Former Indiana Army Ammunition Plant – Brian Adams</i> .....	1
<i>Late Prehistoric Occupation at the Falls of the Ohio River: Somewhat More than Speculation...Somewhat Less than Conviction – Ann Bader</i> .....	3
<i>Privy Excavation at the Nineteenth Century Laboratory of a Louisville Druggist – Ann Bader</i> .....	43
<i>The History and Industrial Archaeology of a Confederate Paper Mill in Nashville, Tennessee – Don Ball</i> .....	51
<i>A Recent Discovery Made in Connection with the McAlpine Lock Replacement Project – Keith Keeney and Jan Marie Hemberger</i> .....	65
<i>The Brick Industry in Louisville, Kentucky Between 1850 and 1860 – Charles Hockensmith</i> .....	69
<i>Atlatl Weights – Richard Lyons</i> .....	79
<i>Mound Builders: Native Americans or Mythic Lost Race? – Valerie Mccarthy</i> .....	83
<i>Summary Report of Excavations at the Clark’s Point Site – Andrew White</i> .....	95
<i>FOAS Registration Form</i> .....	98



**FOAS MONTHLY MEETING GUEST SPEAKERS**

---

**SEPTEMBER  
2002**



**Dr.  
Fred  
Coy**



**Petrogly  
phs  
of  
Kentucky**

**Caesar's  
Casino  
Archaeol  
ogy in  
Harrison  
County,  
Indiana**



**Steve  
Mocas**



**OCTOBER  
2002**

**NOVEMBER  
2002**



**Jay  
Stott  
man**



**Historic  
Archaeolo  
gy in the  
Falls  
Area**

**Green  
River  
Shell  
Midden  
Archaeol  
ogy**



**Anne  
Bader**



**DECEMBER  
2002**

**JANUARY  
2003**



**Dr.  
Carl  
Kramer**

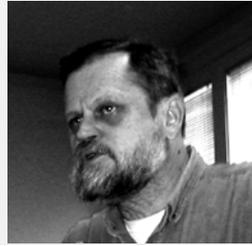


**The  
Prince  
Madoc  
Legend**

**The  
Melungeon  
s**



**Don  
Ball**



**FEBRUARY  
2003**

---

# RECENT ARCHAEOLOGICAL INVESTIGATIONS AT THE FORMER INDIANA ARMY AMMUNITION PLANT

BY

BRIAN ADAMS, PH.D.

PUBLIC SERVICE ARCHAEOLOGY PROGRAM (PSAP)

ANTHROPOLOGY DEPARTMENT

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

URBANA, ILLINOIS

Since June 2002, the Public Service Archaeology Program (PSAP) of the University of Illinois at Urbana-Champaign has been conducting a Phase I archaeological reconnaissance of the former Indiana Army Ammunition Plant (INAAP) in Clark County, Indiana. The area, located in the uplands immediately west of the Ohio River, is a potentially rich source of information relating to the prehistoric and historic occupation of the Falls of the Ohio region. A total of 4,370 acres (1769 hectares) will be examined for archaeological resources, and to date approximately 56 percent (2,456 acres or 994 hectares) of the area has been investigated. The purpose of the current phase of investigations is to locate archaeological sites and determine if additional archaeological investigations are warranted.

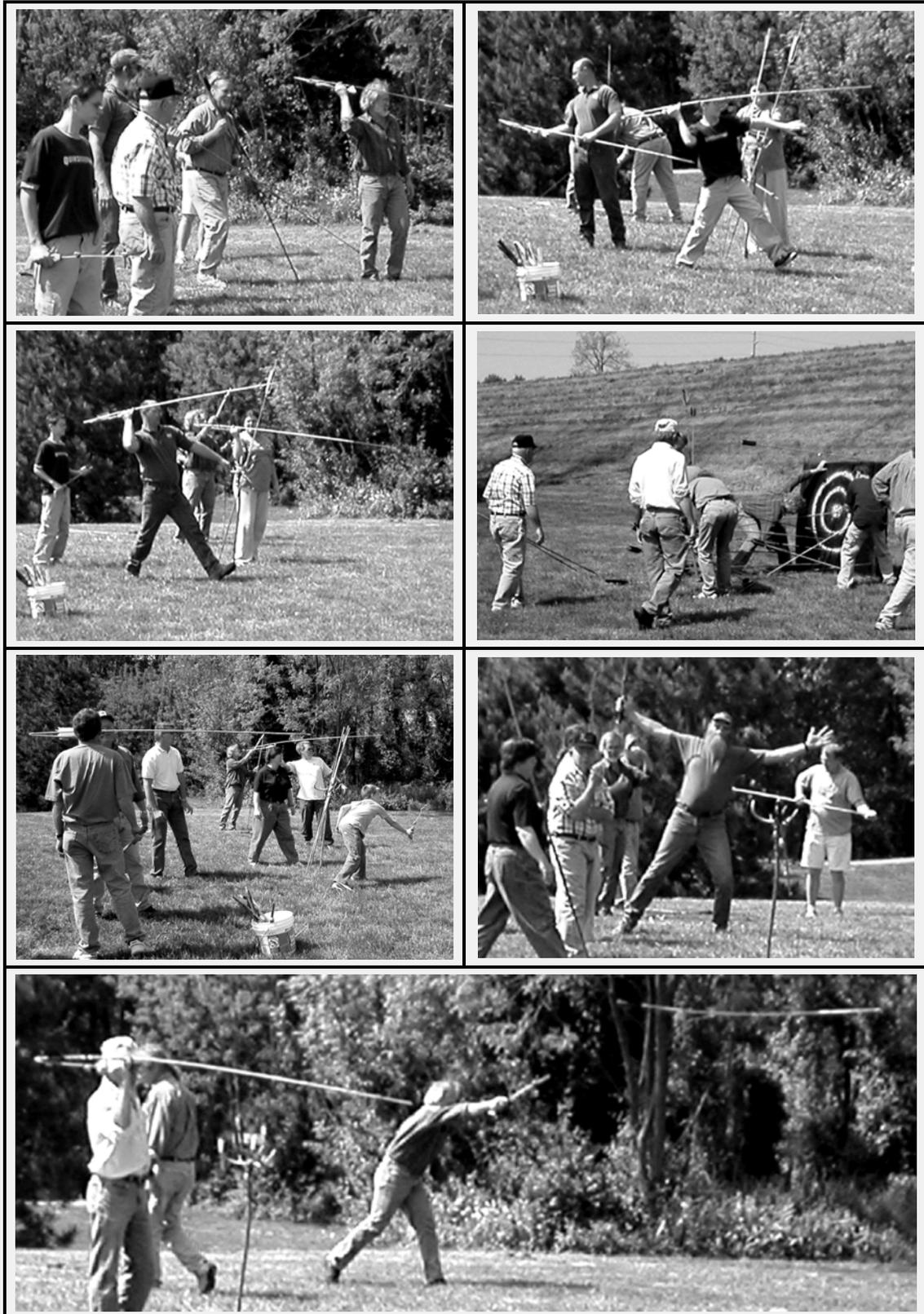
Due to restricted access, little archaeological research has been conducted in the current study area since the early twentieth century. Prior to construction of the ammunition plant, E. Y. Guernsey conducted limited archaeological investigations here and reported several prehistoric sites, including the Spangler, Koons, Willey, and Battle Creek sites. Operation of the INAAP prevented additional research in the area, and as a result, the condition of sites identified by Guernsey has been unknown. One of the goals of the current project is to relocate and evaluate these sites.

Our investigations at the INAAP include both archival and field research. Archival research has involved the examination of historic maps, atlases, and aerial photographs depicting the area both prior to and during construction of the military facility. Maps and photographs pre-dating the INAAP provide information regarding undisturbed landforms as well as land use-patterns up until about 1940. Such information assists us in evaluating the degree to which archaeological resources may have been impacted by development in the area. These documents also provide valuable information regarding the location of historic settlements in the area that no longer exist. As much of the area is currently used as pasture, archaeological field investigations consist primarily of the excavation of screened subsurface tests at 10-meter (ca. 33 foot) intervals.



Although before construction of the INAAP the area had been intensively farmed for several decades, a practice that undoubtedly disturbed the depositional integrity of archaeological sites, the results of our investigations indicate that many sites have escaped complete destruction. To date, we have identified 46 archaeological sites consisting of 22 prehistoric sites, 16 historic sites, and 8 sites with both prehistoric and historic components. Following detailed analysis of artifacts, combined with assessments of site condition and potential for intact buried deposits, recommendations for test excavations will be made for sites believed to represent invaluable sources of information for understanding the prehistoric and historic occupation of the area.

FOAS members tried their atlatl-throwing skills...



# LATE PREHISTORIC OCCUPATION AT THE FALLS OF THE OHIO RIVER: SOMEWHAT MORE THAN SPECULATION...SOMEWHAT LESS THAN CONVICTION

BY

*ANNE TOBBE BADER, PRESIDENT*

*FALLS OF THE OHIO ARCHAEOLOGICAL SOCIETY*

*CLARKSVILLE, INDIANA*

## INTRODUCTION

The late prehistoric occupation in the area of the Falls of the Ohio River, located at Louisville, Kentucky, is clouded in legend. Of the various accounts that have survived, the most popular and persistent is that of the "White Indians," a mysterious race of light-skinned, blue-eyed people who were slaughtered and extinguished by the "savage, barbaric Indians" at a final, valiant stand at Sand Island in the Ohio River at the Falls (McMurtrie 1819; Collins 1874:365; Ford and Ford 1882:35; Pulitzer 1958; Simmons 1979; Kramer 1999:17-27).

The White Indians are generally touted to be Welshmen, led by one Prince Madoc who reportedly sailed from Wales in 1170 with a small group of men in a fleet of ten ships. One year later, he returned home with stories of rich lands, gathered supplies and men, and set sail again. He was never seen in Wales again. As the legend goes, he sailed into the Gulf of Mexico and made his way through Alabama and Tennessee to the Falls, where he met his tragic end (Deacon 1966; Janzen 1972, 1977; Olson 1987).

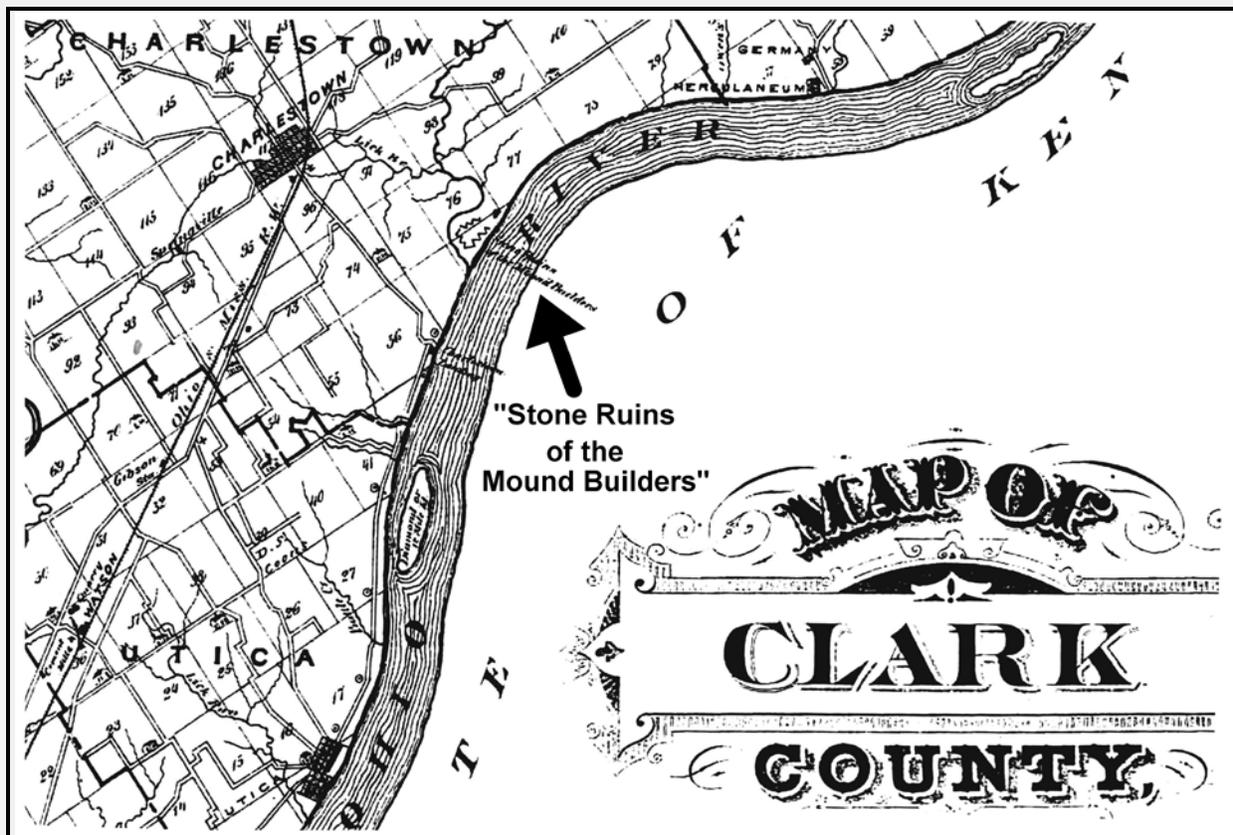
In another version of the story, one that does not specifically claim Welsh origins of the white Indians, local historian Reuben Durrett relates the details of a 1780 meeting between historian John Filson and a group of prominent citizens that included George Rogers Clark. These men told Filson that they had seen the light-skinned Indians, and Clark is reported to have said that a Piankeshaw chief named Tobacco told him of the final battle between the white and red Indians at the Falls (Durrett 1908; Simmons 1979).

Though this story is currently being revisited to place Madoc's voyage in the sixth century, the proponents of this history remain steadfast in their pursuit of supporting evidence. Discoveries of purported Welsh armor and other exotic artifacts have been claimed throughout the years; mysteriously, these have all disappeared (Janzen 1977). Still, the legend thrives today, and the Madocian Society continues to visit Devil's Backbone in Clark County, Indiana, a supposed stone fort of Welsh origin high atop a ridge at the mouth of Fourteen Mile Creek in Clark County (**Figure 1**).

Despite the lack of corroborating evidence for this and other local legends, the Falls of the Ohio River, known historically as the "Gateway to the South," has always been a place where diverse cultures came together. The same was undoubtedly true in prehistoric times. To the south and west of the Falls, the late prehistoric Mississippian culture flourished in the expansive bottomlands of the Ohio River. To the east and north, the contemporary Fort Ancient culture inhabited the rolling uplands. But at the Falls itself, the nature of the late prehistoric occupation remains speculative since the Ohio River floodplain fell to urban development long before the advent of professional archaeology in the state.

The Falls area has been variously defined, but is commonly and somewhat arbitrarily considered to encompass an area within a 100 mile (161 km) radius of Louisville (**Figure 2**). For years, questions regarding the nature of late prehistoric occupation at the Falls have remained unanswered by professional archaeologists (Lewis 1996:150). Too few sites dating from the period after A.D. 1000 have been identified, and until very recently, virtually none have been professionally investigated). The absence of documented late sites at the Falls has prompted the suggestion that the area was a sort of "no-man's land" between the roughly coeval Mississippian culture area to the southwest and the Fort Ancient culture region to the east (Muller 1986:250).

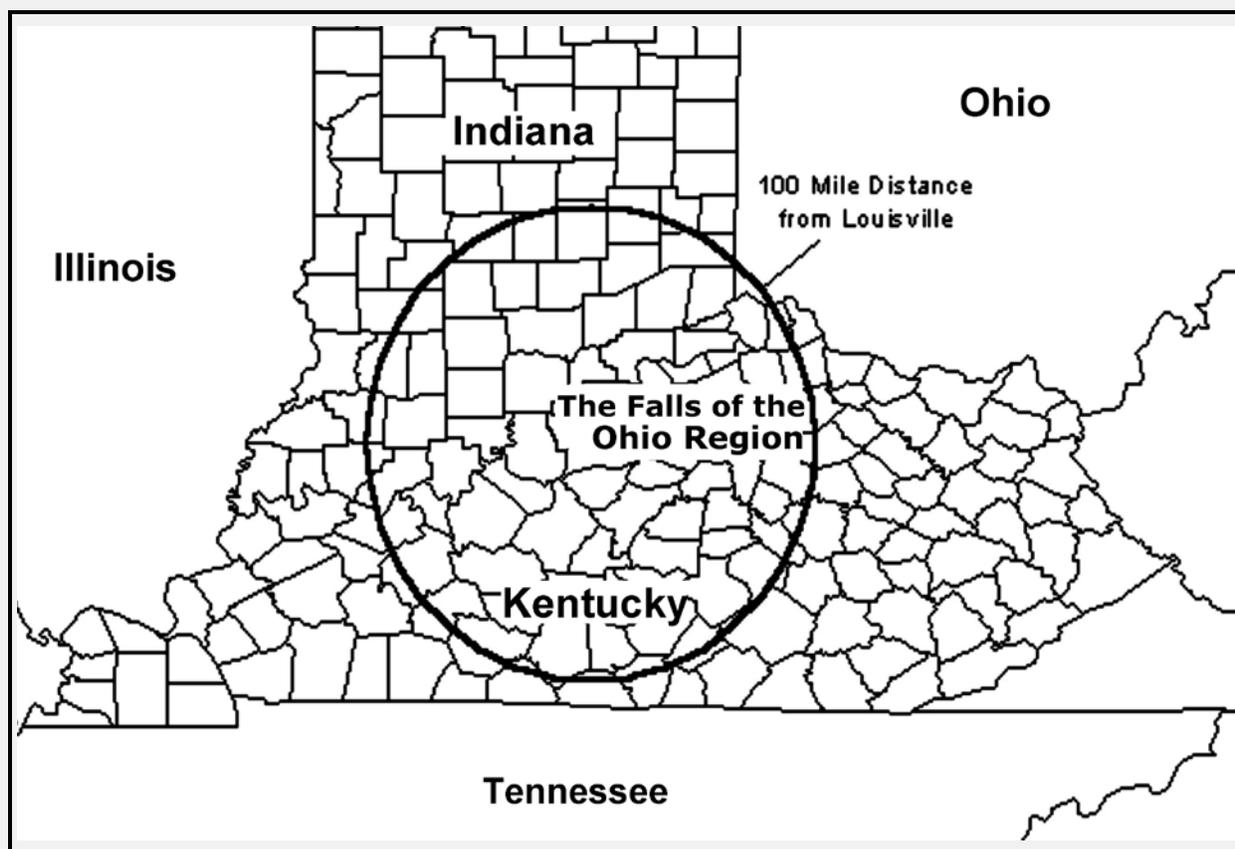
While he (1986:249-250) acknowledges that there were late prehistoric peoples in the area, he suggests the occupation was likely a sort of "backwoods Mississippian," and speculates any sites that did exist in the area were small and widely separated (Muller 1986:250). At the opposite extreme, Griffin (1978) argued that there were important Mississippian sites in the Falls area such as the Prather Site (12CL4) in southern Clark County, Indiana excavated by Guernsey in 1939, and later by Janzen (1971). Griffin furthermore suggests that the Prather Complex represented the easternmost extension of Mississippian sites along the Ohio River (Griffin 1978:551). Kellar (1973) noted that while the Angel Site near Evansville, Indiana is the most easterly of the major Mississippian centers in the Ohio Valley, there was once a significant concentration of Mississippian villages at the Falls (Kellar 1973:59). Granger (n.d.) notes that the Falls lies at the juncture of Mississippian and Fort Ancient cultures, implying proximity but cultural uniqueness of the two.



**FIGURE 1. 1876 MAP OF CLARK COUNTY, INDIANA. ZIGZAG LINE ON THE OHIO RIVER SOUTHEAST OF CHARLESTOWN READS "STONE RUINS OF THE MOUND BUILDERS."**  
(Illustrated Historical Atlas of the State of Indiana, published by Baskin Forster & Co. Chicago)

While some investigators believe late prehistoric occupation at the Falls represented a fully developed Mississippian culture (Seiber and Ottesen 1989:16), many take a middle of the road stance, concluding that the late prehistoric inhabitants at the Falls were situated not only geographically, but also culturally, between Mississippian and Fort Ancient. Muller (1986:249-250) acknowledges that while there were Mississippian peoples at the Falls, he suggests the area was a transitional zone, both in geographic location and adaptation, between the two cultures. It is his contention that Falls Mississippian was likely a sort of "backwoods Mississippian," stating that any sites that may have been present there were small and widely separated. Collins (1979:31) also refers to the late prehistoric occupation at the Falls as an interface between "full-blown" Mississippian and typical Fort Ancient. He uses the generic term "village farmers" to refer to the late prehistoric residents of the Falls, noting the ambivalence surrounding their cultural affiliation. He

states that, although that affiliation is unclear, there is evidence for "considerable" influence from Mississippian cultures, and suggests that the Yankeetown Phase in Kentucky and Illinois may be representative of this mixing (Collins 1979:31).



**FIGURE 2. FALLS OF THE OHIO RIVER REGION.**

To those familiar with the Falls area, there can be no doubt that the current poor understanding of late prehistoric occupation in the Falls area is due to a lack of professionally gathered data rather than a post-A.D. 1000 lack of inhabitants. As correctly noted by Lewis (1990), the apparent dearth of data relevant to the late prehistoric occupation at the Falls of the Ohio is largely the result of the destruction of archaeological sites stemming from the development of the city of Louisville. Because of this lack of data, interpretations regarding the specifics of late prehistoric occupation at the Falls are speculative, based largely on negative evidence. While a sense of conviction relative to the late prehistoric cultures at the Falls of the Ohio may never be fully realized, the present understanding of this occupation can stand re-evaluation.

The intent behind this paper is to dispel some commonly held notions regarding late prehistoric occupation at the Falls and to present data supporting a substantial Mississippian complex at the Falls. The argument is developed along several lines. The first presents evidence of late prehistoric occupation at the Falls from documented accounts of the early development of Louisville. Early historical accounts and recent professional encounters suggest that sites dating to this period at the Falls of the Ohio were neither small and widely separated, nor insignificant. Second, in response to statements to the contrary, the prehistoric environment of the Falls is examined and interpreted to be one that is suitable and perhaps even typical of Mississippian adaptation. Thirdly, a summary review of recent professionally acquired data relevant to this time period is provided. Finally, avenues for future research are recommended. A brief synopsis of late prehistoric research in the modern era is provided first, however.

## REVIEW OF LATE PREHISTORIC RESEARCH AT THE FALLS

The earliest archaeological evidence that can be considered "professional" collected data derives from the excavations and surveys in southern Indiana at the Falls by E. Y. Guernsey, a geologist during the 1930s and 1940s (Guernsey 1939, 1942). Guernsey developed a five stage chronological sequence for the Falls area that encompasses "Folsomoid" remains through that of the historically known tribal groups. Group 1 referred to the proto-historic period that coincided with the pioneer or pre-pioneer times. Guernsey believed that members of this Group occupied the Falls area in small transient groups. He comments further that Borden, of the Indiana Geological Survey, claimed the burials of this Group "were within stone graves and usually in a sitting posture" (Borden 1874 as quoted in Guernsey 1939:29). Graves fitting this description have also been reported from Barren River in south-central Kentucky with known Mississippian affiliation (Evans 1883:608-609).

Groups 2 and 3 of Guernsey's sequence describe the late prehistoric occupants of the Falls area, both of which Guernsey assigns to the Middle-Mississippian culture (Guernsey 1939:29). He characterizes Group 2 as belonging to that of an intensive, but not prolonged, occupation related to those at Wickliffe, Kentucky. It is to this Group that Guernsey assigns the remains at the Prather-Koons-Willey sites in the Utica Township, and he notes that the remains relative to this culture at the Falls may represent the easternmost outpost upon the Ohio of these people. The Prather Site (12CL4), with a single radiocarbon date of A.D. 1045  $\pm$  70 (U Ga-308), has been characterized as an early Mississippian village with rectangular houses, central fireplaces, at least one flat-topped mound with inhumations. One grave contained a small jar and a straight-necked bottle, a circular shell gorget with large central opening at the neck, and a copper effigy (Griffin 1978:551).

Guernsey's Group 3 occupation is said to be of a relatively long duration, who, though related to Group 2 in traits, are dissimilar to them in terms of physical characteristics and material culture. In particular, Guernsey notes that the cranium of Group 3 remains are smaller and more occipitally-flattened than Group 2 people. Undeformed crania are moderately doliocephalic, whereas the crania of Group 2 people are said to be larger, undeformed, and brachiocephalic (Guernsey 1939:29). At sites of this group, Guernsey found burials that were tightly flexed, lying on their right sides. The flexation of these burials was ensured by post-like slabs of limestone placed at the knees, hips, and feet. Round boulders were deposited in the graves, and a pillow-like head support of native slate, worked into oval or squared and rectangular forms, placed under the heads. While the flexed burials may seem to indicate Archaic rather than Mississippian remains, this does not appear to have been the case. Guernsey continues:

The inclusion of funerary pottery is typical, and a specific form of pot has been used. This is of one-half gallon capacity, the body is ovoid and thin-walled, the rim is slightly flared, and the two handles are looped and riveted. This funerary vessel is shell-tempered, as are practically all of the thousands of sherds recovered. It is plain or polished, as is most of the pottery in general [Guernsey 1939:29].

Guernsey observed that grave goods were rare, but that sometimes bone drills, needles, tubular bone beads, and shell discoidal beads were occasionally found. Speaking of the ceramics generally, Guernsey says that:

Perhaps one fifth of the utilitarian vessels were cord-marked. The size range of these is from small and delicate forms to those of exceptional size. Truncate pans and straight-sided vessels are numerous, as are the "water-bottle" forms. In vessels with handles both the loop and strap handle appears, but we have not observed the lugged form anywhere within this region [Guernsey 1939:30].

and...

Except in the decoration of elbow pipes, upon the bowls of which human effigy faces or heads appear, there is little attempt at decorative expression. Although pipes of stone or clay in elbow,

ovoid, and conical forms are abundant and are included with burials, decoration seems confined to the elbow type [Guernsey 1939:30].

Regarding other artifact classes assigned to this Group, Guernsey reports that there were no grooved axes or celts recovered, but digging or agricultural tools, made of slate and notched, were found. Pestles and mortars were also numerous. Projectile points, knives, and drills were common finds, with the triangular projectiles the most numerous of those recovered (Guernsey 1939:30).

At about the same time as the Guernsey investigations, Webb and Funkhouser (1932) noted the presence of prehistoric mounds and associated villages in the Falls area in their statewide survey. Several such sites were noted in the Jefferson County along Beargrass Creek in the area of Jeffersontown. Downriver, they reported stone box graves and a village at the mouth of Otter Creek and the Ohio River (Funkhouser and Webb 1928). Much of this data was, however, gathered from local informants, and no systematic investigation was done.

More recent references to late prehistoric sites in the Falls area are few. In the 1960s and 1979s, an amateur archaeologist and noted local collector, Jerry Hoehler, reported Mississippian period materials from several sites, including the south side of what is now Sixth Street between Mohammed Ali Boulevard and Liberty opposite the Old Armory building (see more below). This site was always referred to as a mound, but was in Hoehler's opinion a natural hill; he noted that the location of the site was on the "highest ground" (Hoehler 1971:16). The Louisville Archaeological Society excavated at the site sometime during the 1960s, but there are no preserved reports of this work (Hoehler 1971:15). Additionally, at the intersection of 16th and Jefferson Streets, late prehistoric artifacts attributed to the Mississippian period were collected by Hoehler in an area approximately forty feet (12 m) south of Jefferson Street on the east side of 16th street, just under the present day sidewalk. The site was found when 16th Street was being constructed through the cemetery during the late 1950s or early 1960s (Hoehler 1971:8). Across the river in Clark County, Indiana, the Newcomb Site (12CL2), situated on a broad alluvial floodplain, has yielded triangular projectile points, shell-tempered pottery, and stone box graves (Granger et al. 1973:42).

On the Kentucky side of the Ohio River, little in the way of professional archaeology was accomplished in the Falls area until the establishment of the Archaeological Survey by Dr. Joseph Granger at the University of Louisville in 1969. Shortly after, with contributions by Dr. Donald Janzen of Centre College in Danville, more information regarding the late prehistory of the Falls area was uncovered. Boisvert (1977:136) noted the presence of late prehistoric materials in the area. With the exception of the Prather Mound (12CL14) in southern Indiana.

To date, 51 sites have been identified in Jefferson County as Late Woodland/Mississippian. This simply means, of course, that one or more triangular projectile points or shell-tempered potsherds were found at these locations. Most of these were recovered from surface contexts, with no evidence to suggest associated Mississippian features or evidence of occupation.

Several earthen mound sites have been recorded in the area. Flat-topped, pyramidal mounds are diagnostic of Mississippian culture. Few such mounds, however, are extant in the Falls area today, and only one, the Prather Mound in Clark County, Indiana, has been subjected to sufficient intensive investigation to permit a distinction between Woodland and Mississippian origin. The Sutherland Mound (15JF287) located northeast of the mouth of Harrods Creek in Jefferson County, Kentucky is situated on the floodplain of the Ohio River, at a distance of 2600 feet (792 m) from the bank. The mound is described as conical. Numerous artifacts have been reported from this mound (Granger et al. 1973:3), but its temporal/cultural affiliation is unknown. At Hunting Creek in the Harrod's Creek drainage in the northern part of Jefferson County, three possible mounds (15JF268) have been recorded. This site has reportedly yielded grog-, limestone-, and shell-tempered pottery, and Middle/Late Woodland artifacts, including Lowes and Bakers Creek projectile points, pipes, gorgets (Granger et al. 1973:3; Granger and Bader 1991:36). The site, investigated by the University of Louisville, contained thermal and storage features and was dated to 350 ± 350 B.C. (U Ga 1,259). The Oxmoor Mound (15JF7) is one of the

earliest sites reported in the county (Webb and Funkhouser 1932). Located on the Middle Fork of Beargrass Creek, the site is largely protected by its location on a large, privately-owned farm. No artifacts have been reported from this mound, although looting has been noted at the location over the years (Granger et al. 1973:1). Evidence of prehistoric mounds is not limited to the Louisville floodplain proper. Downriver, in Meade County, Kentucky, it is reported that a mound and cemetery were located on the Woodson Farm between Highway 60 and Sinking Road, three miles (4.8 km) southwest of Brandenburg. The mound was three hundred feet (91.4 m) long and two hundred and forty feet (73.2 m wide). The cemetery once contained "a large number" of stone box graves. The site has been entirely destroyed (Webb and Funkhouser 1932:). At Fort Knox in Hardin and Meade counties, a total of nine mound and mound complexes sites have been reported (O'Malley et. al 1980). The earthen mounds include sites 15HD 126, 15HD143, 15HD263, 15HD273, and 15MD11, while the mound complexes are 15HD256, 15MD265, 15HD262, and 15HD292. However, due to the preliminary level of investigation at these sites, it is not possible to confidently attribute them to the Mississippian period.

The most well-documented mound site in the Falls area is the Prather Site (12CL4), located about 10 km north of Louisville. The site contains a "most noteworthy mound." Recognized as early as 1882, it "often gives up bones, pottery, and articles which are evidently implements of war" (Ford and Ford 1882:398). The Prather Site is thought to be an early Mississippian village with rectangular houses, central fireplaces, at least one flat-topped mound of moderate size with inhumations (Janzen, n.d., notes on file at the University of Louisville Program of Archaeology). The site is located on a flat upland plain surrounded by gently rolling hills, with a small spring nearby. Excavations conducted by Janzen in 1971 resulted in the recovery of shell-tempered pottery, triangular projectile points, shell beads, and more. A Mississippian wall-trench house pattern was uncovered, and a single radiocarbon date of A.D. 1045  $\pm$  70 (U Ga-308) was obtained. One grave contained a small jar and a straight-sided bottle with a large opening at the neck, a circular shell gorget, and a copper effigy (Griffin 1978:551).

In light of the limited professionally acquired documentation of Mississippian occupation at the Falls, other supporting evidence of this period must be sought. Among several lines of evidence that can be pursued is data regarding flat-topped earthen mound construction and stone box cemeteries, two phenomena known to characterize Mississippian culture.

## THE DOCUMENTARY EVIDENCE

Early nineteenth century historical accounts of the development of the city of Louisville were researched to reveal information regarding the prehistoric occupation at the Falls. Such records are of demonstrable value in historic archaeological research. More rarely, they can also provide valuable insights into the study of prehistory. The archival research showed there were once numerous prehistoric mound sites and stone box cemeteries in the Falls area. Although many references to mounds were found in the historic literature, it is not possible at this distance in time to positively assign the sites described in these accounts to the Mississippian period. However, the association of mounds, stone box cemeteries, triangular projectile points, shell-tempered pottery, and other artifact types supports the tentative assignment of some mounds to this culture. Although many other references to generalized prehistoric remains were very frequent in the literature, only those records indicative of late prehistoric material culture and settlement are presented here. In particular, two loci are indicated by the data. The first of these is represented by a large mound complex adjacent to the Falls themselves in what is now downtown Louisville. The second is located in the adjacent upland along the South Fork of Beargrass Creek in central Jefferson County.

### The Mounds

Janzen first brought to the attention of the professional community the existence of several prehistoric mound sites at the Falls (Janzen 1972). He learned of these sites from early nineteenth century historical accounts of the city of Louisville (Durrett 1893; 1896). In addition to the few cases presented by Janzen,

additional mound and stone box cemetery sites at the Falls were recorded by other early historians and journalists. Through these accounts, one is led to believe the prehistoric mounds were long ago created by the mysterious race of "Mound Builders," a long vanquished people unrelated to the more recent "less advanced, savage" Indians encountered by the early European explorers and settlers (see Willey and Sabloff 1973:30-54 for a comprehensive discussion of the Mound Builder myth; also see McCarthy, this volume). Although it has been established beyond doubt that the Mound Builders were the ancestors of the modern Native Americans (see Henderson 1992), the legend persists to this day.

The earliest report of prehistoric earthworks comes from McMurtrie (1819:109). He reports that mounds were not an unusual occurrence in the Falls area:

Mounds or tumuli are occasionally met with, some of which have been opened. Nothing, however, was found to repay the trouble of the search but a few human bones, mixed with others, apparently belonging to the deer.

In his introductory remarks to an early history of Kentucky (Marshall 1824), the naturalist Rafinesque reports that there were four sites of "ancient works and one monument in Jefferson County on the Ohio near Louisville." Unfortunately, he provides no further information regarding the location or contents of these earthworks. Collins (1874:365) also relates that mounds or "tumuli" around current-day Louisville were "tolerably numerous." Many were opened by the curious, and the earth was hauled away. In most of these, there were "only human bones or deer bone."

Some contained but one skeleton, from others, mounds of similar size, the remains of twenty or more were taken-making it very probable that the former were designed for the mausoleums of chiefs or distinguished persons, the latter for those of the community [Collins 1874:365].

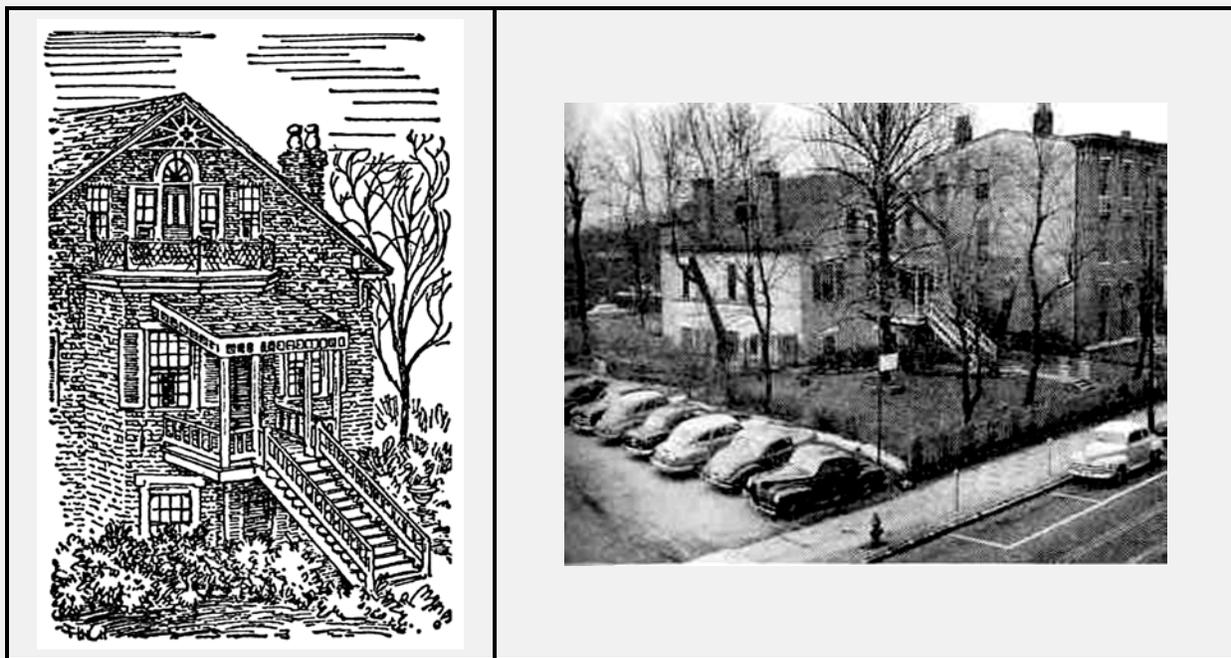
At this early time, interpretations regarding mound function were offered, although these interpretations are not consistent with those offered today. In an 1882 history of the Falls of the Ohio River cities, one can read:

Mounds were used for at least two purposes, as points of observation and as places of worship. The former are generally found on higher points of land and commanding a view up and down a river or valley from the northeast to the southwest. Sacrificial mounds are distinguished by their smallness and the deposits frequently found in them, and also by the [bones] femur, pelvis, and temporal bones being the most common [Ford and Ford 1882:398].

Detailed information regarding individual mounds is more difficult to cull from the literature. From Durrett, however, it is known that there was once a mound located at what is now Fifth and Main Streets in Louisville (Durrett 1893; 1896). This feature was of significance in the lot numbering for the young city. The site of the mound, an easily recognized early landmark, became Lot No. 1 of the city. Johnston also reports on this mound, noting that it was large, measuring sixty feet (18.3 m) in diameter (Johnston 1896). The mound, sometimes referred to as the Main Street Mound, was excavated by Evan Williams in 1802 when opening Fifth Street from Main Street to the River.

Durrett also report on the Gwalthmey, or Grayson Mound (Durrett 1893; 1896). It was reportedly fifteen feet (4.6 m) in height, and located on Walnut Street (now Mohammed Ali Boulevard) at Sixth Street opposite Louisville Gardens. The property upon which the mound once stood first belonged to Mr. John Gwalthmey, a wealthy Virginian, who, around 1810, built a large house upon it (**Figure 3**). The Gwalthmey's owned the house only about ten years when it was purchased by David L. Ward who gave it as a wedding present to his daughter Sallie on her marriage to Frederick Grayson (Briney 1955:7). In time, under the ownership of the Graysons, the house became a famous Louisville landmark, frequented by Sallie's niece and namesake, Sallie Ward, a prominent and popular socialite. In describing the home, which had nineteen rooms of considerable size on three floors, one newspaper account provides a mental image of the size of the mound upon which it stood:

One may well imagine the thrill that came with the construction of this towering palace, its own magnificent loftiness augmented by its location upon an Indian mound of considerable height. A splendid vantage point it must have been [Anonymous 1926].



**FIGURE 3. THE GRAYSON HOUSE ATOP A PREHISTORIC MOUND.**  
(As shown in Riebel 1954:125)

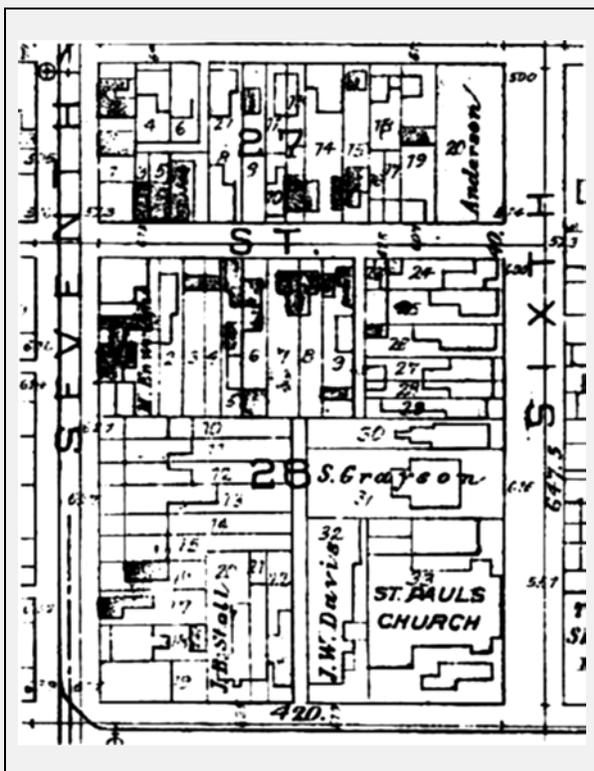
A portion of the mound upon which the house stood was used as a borrow site to fill Grayson's Pond (or Lake), a favorite recreation spot which lay directly north of the house. The remainder of the mound was left intact beneath the old house. With time, the tract was subdivided, and in 1849, St. Paul's Church was built next door to the Gwalthmey/Grayson House upon the site of the destroyed portion of the mound (**Figure 4**). The two adjacent property tracts upon which stood the church and the house measured 174.6 feet (53.2 m) by 204 feet (62.2 m) in dimension, providing some indication of the size of the mound site that straddled the two lots (**Figure 5**).

A description of the two-hectare tract of land on which the residence was built is found in an anonymous article. The tract included a beautiful lake [Grayson's Pond], forest and orchard trees, and two burial grounds (Anonymous 1926). This article supports the notion there were once at least two mounds on the Gwalthmey/Grayson estate that extended from Cedar to Walnut Streets, and from Center Street to near Seventh Street. This second mound, measuring "several hundred feet in circumference," also adjoined the lake (Briney 1955:6). The 1926 newspaper article also clearly states that reported "burying grounds" were located within the "mounds" (Anonymous 1926).

In 1867, the Gwalthmey/Grayson house became occupied by J. C. Baumberger (although an 1876 map shows the property still in the possession of Sallie Grayson). With later improvements to the house, Baumberger continued to find artifacts, including a "perfect battle ax of stone" (Anonymous 1926; Briney 1926). Over the course of the Gwalthmey/Grayson/Baumberger occupation, the mounds yielded:

...stone axes, flint arrow-heads, pipes, earthenware, and such implements that are usually found in old mounds. They also contained human bones, so far advanced in decomposition that they went to dust on exposure to the air. As recently as 1888, Mr. Baumberger dug from his lot a very fine specimen of the Neolithic ax [Durrett 1896:33].

**FIGURE 4. ST. PAUL'S CHURCH.**  
(As shown in Riebel 1954:76)

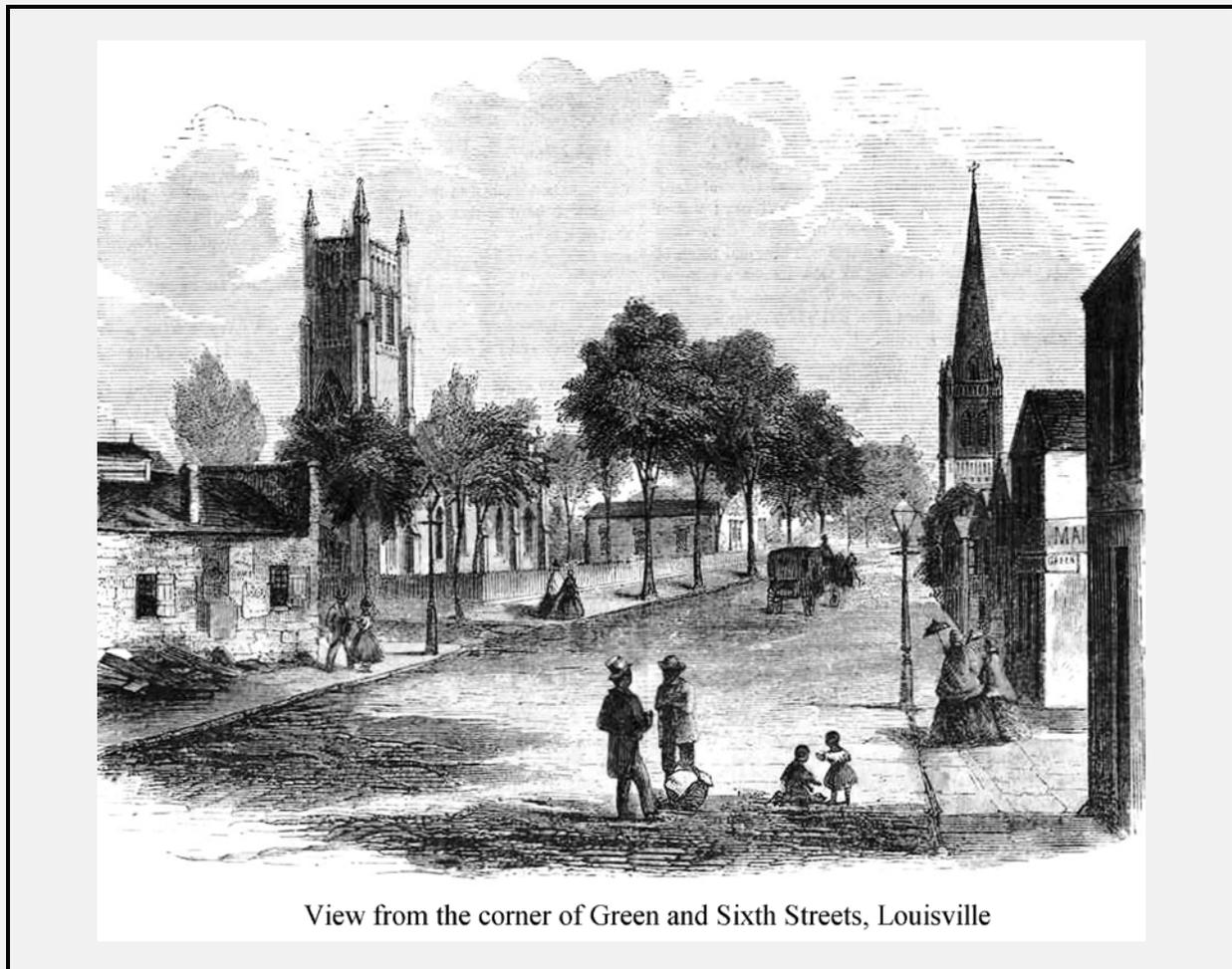


**FIGURE 5. 1876 PLAT MAP SHOWING GRAYSON HOUSE AND ST. PAUL'S CHURCH.**

(Atlas of the City of Louisville, published by the Louisville Abstract & Loan Association, 1876).

Immediately adjacent to the Gwalthmey/Grayson property was located yet a third mound. Johnston describes this mound. It was located on Fifth Street between Walnut and Chestnut Streets. The residence of Judge Nichols stood on this artificial mound (Johnston 1896). However, no artifacts of any kind were found when the upper portion of the mound was disturbed prior to the construction of the house. A considerable portion of the mound was removed *to enlarge the level space* [emphasis added]. It was thought at the time that when the elevation of the mound was excavated to a greater depth, artifacts would be recovered. However, a few years prior to 1896, when a house adjacent to the Nichol's place for "the manufactory for the blind" was built, no artifacts were found during the construction of the foundation [Durrett 1896].

All three mounds were completely destroyed by 1926. **Figure 6** depicts the area of the mounds in 1856.

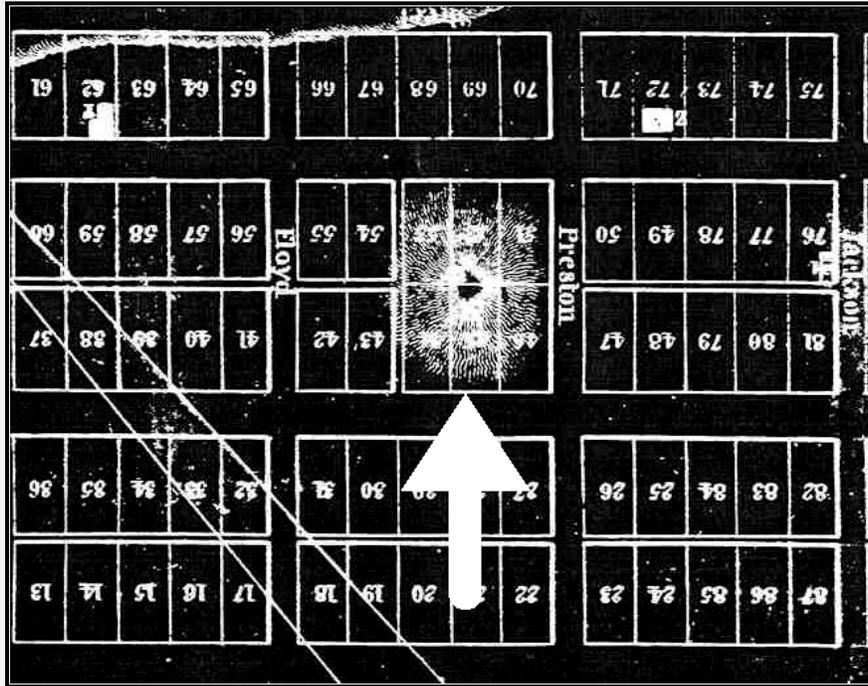


**FIGURE 6. A VIEW OF GREEN AND 6<sup>TH</sup> STREETS SHOWING ST. PAUL'S CHURCH IN 1856.**  
(As shown in Ballou's Pictorial Drawing-Room Companion 1856:249).

Evidence for other mounds in the area was derived during this research from historic mapping. An 1831 map of Louisville and its environs (E. D. Hobbins, City Surveyor) depicts a topographic feature (shown in negative) that appears to be an earthen mound of artificial construction (**Figure 7**). It was located on Preston Street, between Market and Main Streets, just south of Beargrass Creek, and encompassed six city lots.

An 1865 map of Louisville depicting the twelve Civil War forts and associated entrenchments of the area shows another likely mound site. This mound is located at the western end of Goose Island at

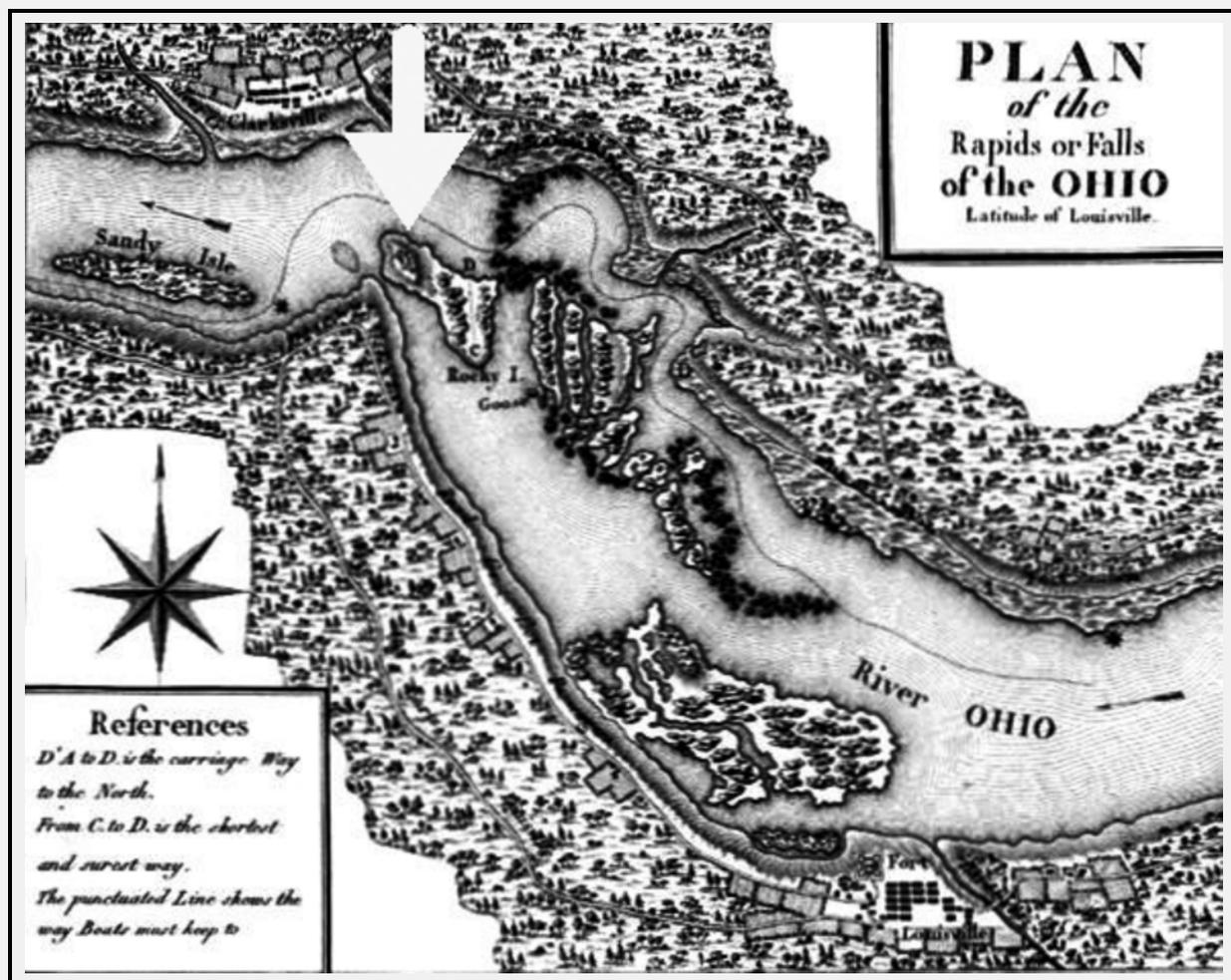
the Falls themselves (**Figure 8**). This prominence is not visible today due to erosion and increased water level resulting from the impoundment of the river.



**FIGURE 7. MOUND BETWEEN PRESTON & FLOYD STREETS?**  
(A Plan of the City of Louisville and its Environs in 1831, published by Hobbs)



**FIGURE 8. 1865 MAP - MOUND ON GOOSE ISLAND?**  
(Louisville and its Defenses, Office, U.S. Engineers, Cincinnati, Ohio)



**FIGURE 9. 1796 MAP BY GEORGES HENRI VICTOR COLLOT.**

**Figure 9** shows another possible instance of a mound constructed on an island at the Falls north of the historic town of Shippingport. This feature is located at the western point of what was once known as Rock Island (now underwater) just west of Goose Island. On this island, an unusually geometrically uniform topographic feature is depicted on a 1796 map by Collott. This same feature is shown on a 1793 map by Gilbert Imlay (not shown here) with a slightly more rounded configuration. This feature does not appear on later maps, and is potentially an earthen mound of prehistoric origin.

On the Indiana side of the Ohio River, mounds have also been reported in the historic literature. A map provided by Professor E. T. Cox in 1873 reports in a geological survey of Clark County shows three locations of Indian mounds near the confluence of Fourteen Mile Creek and the Ohio River (**Figure 10**).

One of these is near Twelve Mile Island, and the other two are located along both banks of Fourteen Mile Creek upriver. At the mouth of Fourteen Mile Creek is a reported fortification said to have been present on a ridge top known as Devil's Backbone (Janzen 1977) (See **Figure 1** above).

Nearby, on the David Spangler farm in Utica, there is reported to be an ancient burying place at the forks of Battle Creek. The creek derived its name as early as 1800 from the belief of the settlers that the Mound Builders buried their dead there after a battle. No more is known about the place, except that many bones were found there (Ford and Ford 1882:398). The New Washington earthwork (12CL32) or Robinson Mound is located circa 2200 feet (671 m) east of Fourteen Mile Creek in Clark County. The site, now difficult to define, was first reported by E. T. Cox, Indiana State Geologist, in 1873 (Cox 1874:185-187). A number of diagnostic projectile points are reported from

this mound, but their location and type have not been recorded (Granger et al. 1973:43). In the Washington Township, Guernsey reports the existence of an impressive circular earthwork near which are unexplored stone graves (Guernsey 1939:32).



**FIGURE 10. 1873 MAP SHOWING MOUND LOCATIONS.**  
(Cox 1874)

Elsewhere on the Indiana side of the Ohio River, it is reported “in other portions of the Charlestown Township are mounds, though of such slight importance as not really to deserve even passing notice” (Ford and Ford 1882:341). Other sites in southern Indiana along the river, more removed from the Falls themselves, include the following. In the Bethlehem township, on the “old Simington place” were two or three mounds that were identified by Dr. Cox as prehistoric. The larger one measured twenty-five feet (7.6 m) by forty feet (12 m) at its base. At the time that he recorded it, it was five to six feet (1.5 to 1.8 m) in height. The situation of this mound “was well adapted for a view of the Ohio River in both directions ” (Ford and Ford 1882:320). A short distance away, on the Bowman place, was a group of four or five other mounds. These ranged in size from eight to ten feet (2.4 to 3 m) in diameter and half that in height. About 2 miles (3 km) below Bethlehem, on the property of Thomas Stephens and one mile (1.6 km) from the Ohio River, were more mounds (Williams 1882:320). Also, in Floyd County, on top of the knobs north of Indiana Highway 111 on the Jack Mason farm, a mound once stood.

Durrett comments on the Mound Builders, presaging a debate that continues to this day among archaeologists:

Who these first occupants of the site of our [Louisville] may have been, we know not. They were early here, dwelt long, and passed away without leaving a history, a tradition or a name. All that they left us by which to judge of them were their earth mounds and their implements of stone, and clay, and shell, and copper. These relics have already been the basis of conflicting opinions among ethnologists, and will doubtless be so to others as their science advances [Durrett 1896:33].

### **The Stone Box Cemeteries**

A second indicator of late prehistoric occupation is the presence of stone box graves. These cemeteries are characterized by graves lined with slabs of limestone or slate. In many instances, the body is fully extended, although flexed burials and cremations have been also been observed on Mississippian sites in the region noted (Lowthert et al. 1998). Stone box graves occur in association with almost every large late prehistoric mound group and fortified site, sometimes in large cemeteries or accretional mounds, and sometimes in small family groups or isolated graves. Late prehistoric graves are also known to occur without stone linings. Muller suggests that stone box cemeteries occurred in or adjacent to "moderate-size Mississippian settlements, those larger than 0.3 hectares (0.7 acre), that were located in more or less central locations within a cluster of sites (Muller 1986:197).

While the Falls area is not generally thought to lie within any of the primary distribution areas for stone box graves as documented by Brown (1981:12), these features were once common there according to historical documentation. In 1910, Bennett Young reports that stone box graves occurred over the greater part of Kentucky, although more frequently in the south-central and western parts of the state (Young 1910:22). Durrett notes that in Louisville, on Bank Street, between 28th and Hardin Streets, stone box graves were identified on the property of Captain James Irvin:

They consisted of flat rocks laid at the bottom, the same at the sides and ends and the same on top for a cover. Inside of these rough sarcophagi were human skeletons of an advanced state of decay. In some of them were also stone pipes and pieces of earthenware, which seemed to be fragments of bowls and other vessels [Durrett 1896:33].

And at the intersection of Liberty and Third Streets:

Other Indian graves were scattered about in different localities, but did not attract the attention of the pioneers sufficiently for any record to be kept of them. There were dozens of them on the edge of a pond near the intersection of the present Green (Liberty) and Third streets, but so little attention was paid to them that tradition has preserved no particulars concerning them [Durrett 1896:34].

While the latter quotation does not specifically mention the burials were of the stone box type, the proximity of this cemetery to the Gwalthmey/Grayson complex of mounds warrants a mention of their presence here.

Near the intersection of Main and Twelfth streets in Louisville, on the eastern slope of a ravine that there entered the river, the pioneers found a number of piles of rough stones, which upon examination turned out to be coverings of graves with human skeletons in them. They were like the piles of stone which covered skeletons on Lublegrud Creek in Clark County, Kentucky, which were known to have been made by the Shawnees. It is a singular fact that these graves at the Falls of the Ohio were upon the first ground occupied by the whites when they moved from Corn Island to the main shore in 1778-79 [Johnston 1896:34].

Young (1910:28-29) describes a similar burial configuration that was found "quite frequently in Nelson and adjacent counties." This burial form was characterized by a slight excavation, half a foot

to a foot (less than one-third of a meter) deep. Over the body were laid piles of stone from two to four feet (0.5 to 1.2 m) in height and six to twelve feet (2 to 3.5 m) in diameter. When finished, a sort of arch was created over the ground surface. Young notes that, since these cairns were not impervious to the elements, only fragments of bone were found beneath them.

Across the river in Clark and Floyd Counties of Indiana, stone box graves have been widely reported. One of these references relates to the Old Clarksville, or Elrod, Site, 12CL1. This site, situated along the Ohio River at the Falls, is mostly known for its Late Archaic component. Regarding this site, Borden (1874) reports in a geological survey of the area that:

The region in the vicinity of the Falls of the Ohio river contains a great many ancient Indian burial places. Almost every elevation of the low lands or peaks of the Knobs show some evidence of having been occupied by a pre-historic people. The most extensive field for pre-historic research is Clarksville below the Falls, where there is an ancient burial ground on the river bank. During high water, large masses of the bank are undermined and topple into the river exposing the skeletons, which lie about two feet below the surface. At this place I have frequently found human bones protruding from the bank. The skeletons are enclosed by pieces of slate placed on edge. They are buried in a sitting posture and are covered with shells, and fragments of pottery. Stone pestles and stone axes, of a few years ago, were quite common and in the course of an afternoon a good collector might find a large number; together with a variety of arrowheads and other relics. Of the pottery found, one piece probably represented an owl, and was evidently used for drinking purposes. There is an opening at the back of the head and in the beak [Borden 1874:184-186].

The presence of hooded water bottles in effigy form at this site is strong evidence of Mississippian occupation. Later investigations at this site by Guernsey in the 1930's revealed as many as 200 burials; none of these, however, were in stone box graves as reported by Borden. It has been suggested by newspaper articles that a large portion of this site was washed away in the severe flooding of 1883 and 1884 (Janzen 1971). However, Guernsey did record stone box graves at the nearby Newcomb Site (12CL2) located at the Falls (Guernsey 1939:29). The Newcomb Site is situated on the alluvial plain of the Ohio River located several hundred meters to the south. Materials recovered from this site also include triangular projectile points and shell-tempered pottery (Granger et al. 1973:42).

Regarding the Old Clarksville Site, Collins reports:

A little below where Clarksville, Indiana was situated in 1819 was the site of an Indian village, covered to a depth of six feet with alluvial earth. At that date, large quantities of human bones, in a very advanced stage of decomposition, were found interspersed among the hearths, and scattered in the soil beyond them. The village must have been surprised by an enemy, and after the terrible battle which ensued, the combatants in large numbers left upon the spot [Collins 1874:365].

Quoting McMurtrie, Collins continues:

Had it been a common burial-place, something like regularity would have been evinced in the disposition of the skeletons; neither would we have found them in the same plane with the fire-places of an extensive settlement, or near it, but below it [McMurtrie 1819:87].

Down river, in the Silver Creek Township of Floyd County, Indiana, it is reported that stone box graves were encountered on the Thomas Montgomery farm, in the eastern part of the township (Ford and Ford 1882:358). One grave supposedly contained a man about eight feet (2.4 m) in height, but the bones disintegrated upon exposure. Another grave was found close by. This was the grave of an infant, and it was protected on all sides by limestone. These bones were also in a state of poor preservation.

## Summary

The literature suggests that many prehistoric mounds were once present in the Falls area, especially in the floodplain. **Figure 11** shows the distribution of those mounds and stone box cemeteries for which definite locations have been identified from the nineteenth and twentieth century literature. These mound sites were overlain on a current City of Louisville street map, and the former location of ponds and original stream locations were added. [The pond locations are significant, since it has been suggested that the ponds were borrow pits used to create the mounds. More information concerning these ponds is provided below in the discussion of environment.] Even though this map is not inclusive of all the former mound locations, the clustering of these sites at the Falls is very suggestive of a major Mississippian center. This was first recognized by Dr. Joseph Granger, who named the mound complex described above at Sixth and Walnut Streets the Green Street Site (15JF95). He proposed that the site could have been a Mississippian center complete with plaza (Granger n.d.) (**Figure 12**). Although the features in his mapping are somewhat conjectural, the findings of this research support his conclusions. **Figure 13** depicts a more accurate location of the mound sites, cemeteries, and ponds. Furthermore, the original stream bed of Beargrass Creek is shown. The overall configuration is not unlike other Mississippian centers such as Angel or Kinkaid. The size of the mound complex compares favorably with other such sites. Exclusive of the westernmost cemetery, the area encompasses a total of approximately 180 acres (73 hectares), while Angel Mounds at Evansville covers an area of about 103 acres (42 hectares) within the pallisade walls of the town, although that is reportedly larger than the actual archaeological deposits (Black 1967-41-42).

The presence of mounds does not in itself, of course, signal the late prehistoric period; the mounds could date to the earlier Woodland time frame. Support for the later assignment in the Falls area can be strengthened by the association of triangular projectile points, shell-tempered pottery, and stone box cemeteries. These associations are difficult to firmly establish at this point in time. However, other points of argument tend to support the later assignment of the mounds.

While Woodland artifacts have been found across the area, especially from floodplain contexts and adjacent uplands overlooking the floodplain, sites of this period with features or substantial midden deposits signaling long-term occupation are few (Seeman 1978). The Zorn Avenue Site (15JF250), almost definitely an Early Woodland Adena site of some significance, is a notable exception (Matthews 1958). The Hunting Creek Site (15JF 268) is a Late Woodland site north of the Falls with evidence of features (Granger and Bader 1991:36). What appear to be Woodland features have also been found at the Arrowhead Farm Site (15JF237) (Mocas 1976). Two house patterns dating to the Woodland period have been recently found in Harrison County, Indiana at the Caesar's Casino site just below the Falls (Mocas, personal communication). However, in comparison to the preceding Late Archaic occupation of the area, population density seems to have dramatically decreased during the Woodland period from Archaic times, and the number of Woodland sites is few in comparison.

It is common for sites in the area with stratified deposits, such as rockshelters (See Bader et al. 1998), to contain components dating from all periods of the Archaic and Late Prehistoric/Mississippian, while Woodland components are totally missing, or represented by only a few artifacts.

It has long been noted that there were differences over time in the choice of raw materials used for lithic tool manufacture (Seeman 1974; Janzen, personal communication). Middle to Late Archaic peoples seem to have relied heavily upon the poorer quality, locally available raw material, notably Muldraugh and cobble cherts, with only minimal utilization of the high quality blue-gray Wyandotte chert obtainable downriver in Harrison and adjacent counties of Indiana. Increasing reliance on local cherts throughout the Archaic period, culminating in the Late Archaic as reflected by large numbers of sites with deep, dense middens, signals a large, long-term resident population that seem to have exploited restricted catchments or resource zones. The large late Archaic population, along with evidence of conflict and violence from burial context, would seem to point to resource competition among groups locally. Groups were likely organized into specific territories, and the fact that non-local cherts were not heavily utilized may have been related to access and reduced mobility.

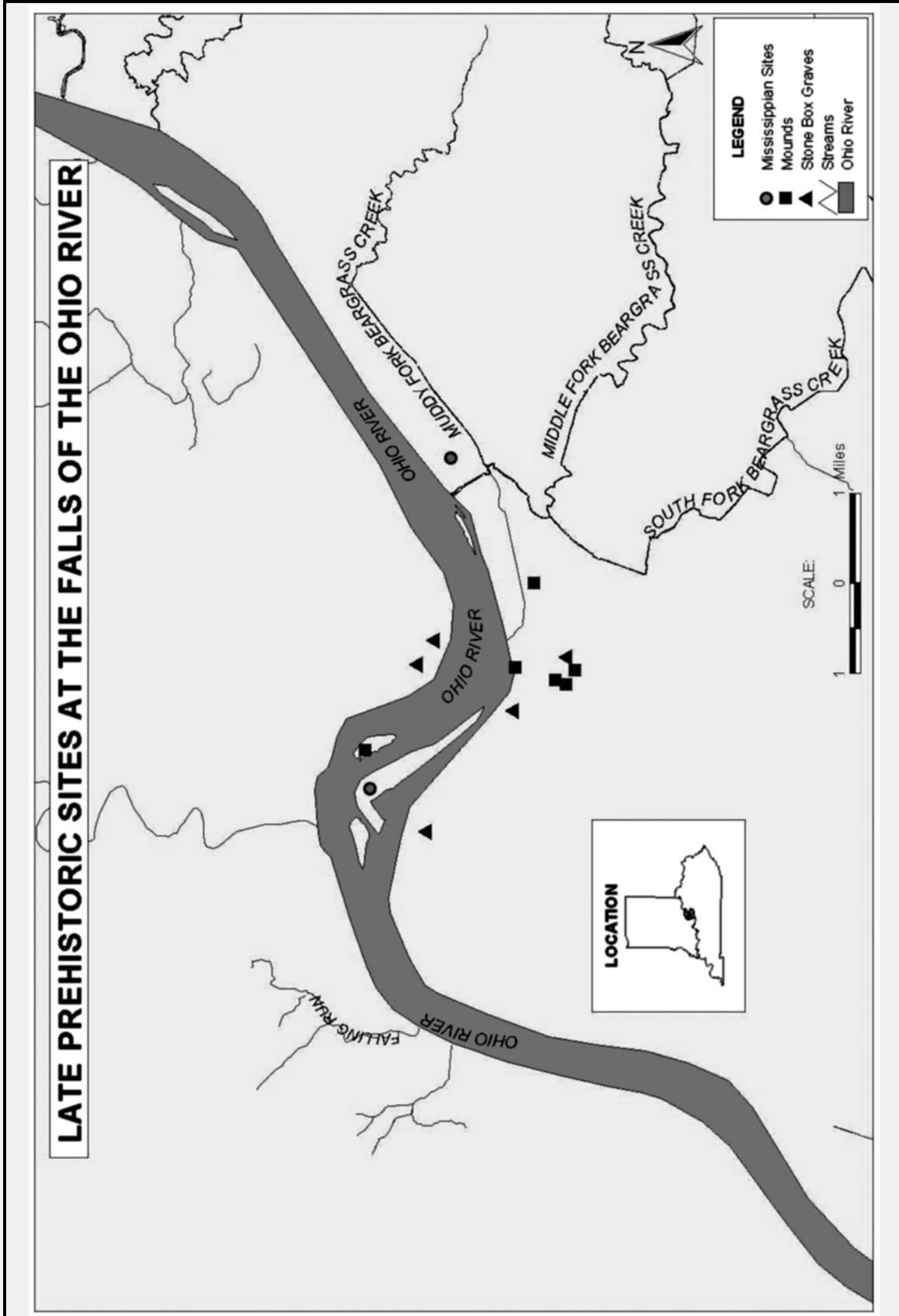


FIGURE 11. MOUNDS, STONE BOX CEMETERIES, AND OTHER SITE LOCATIONS AT THE FALLS.

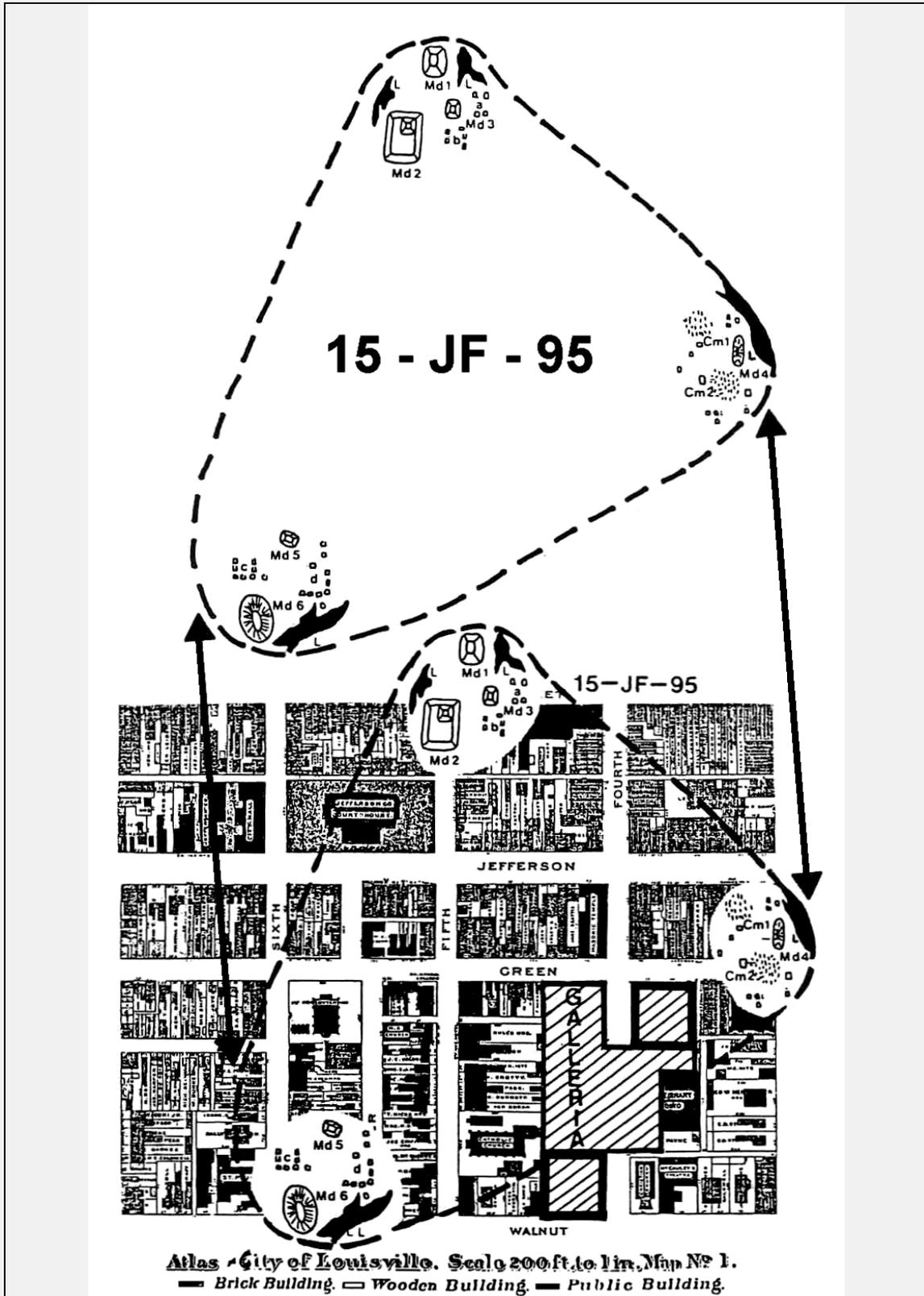
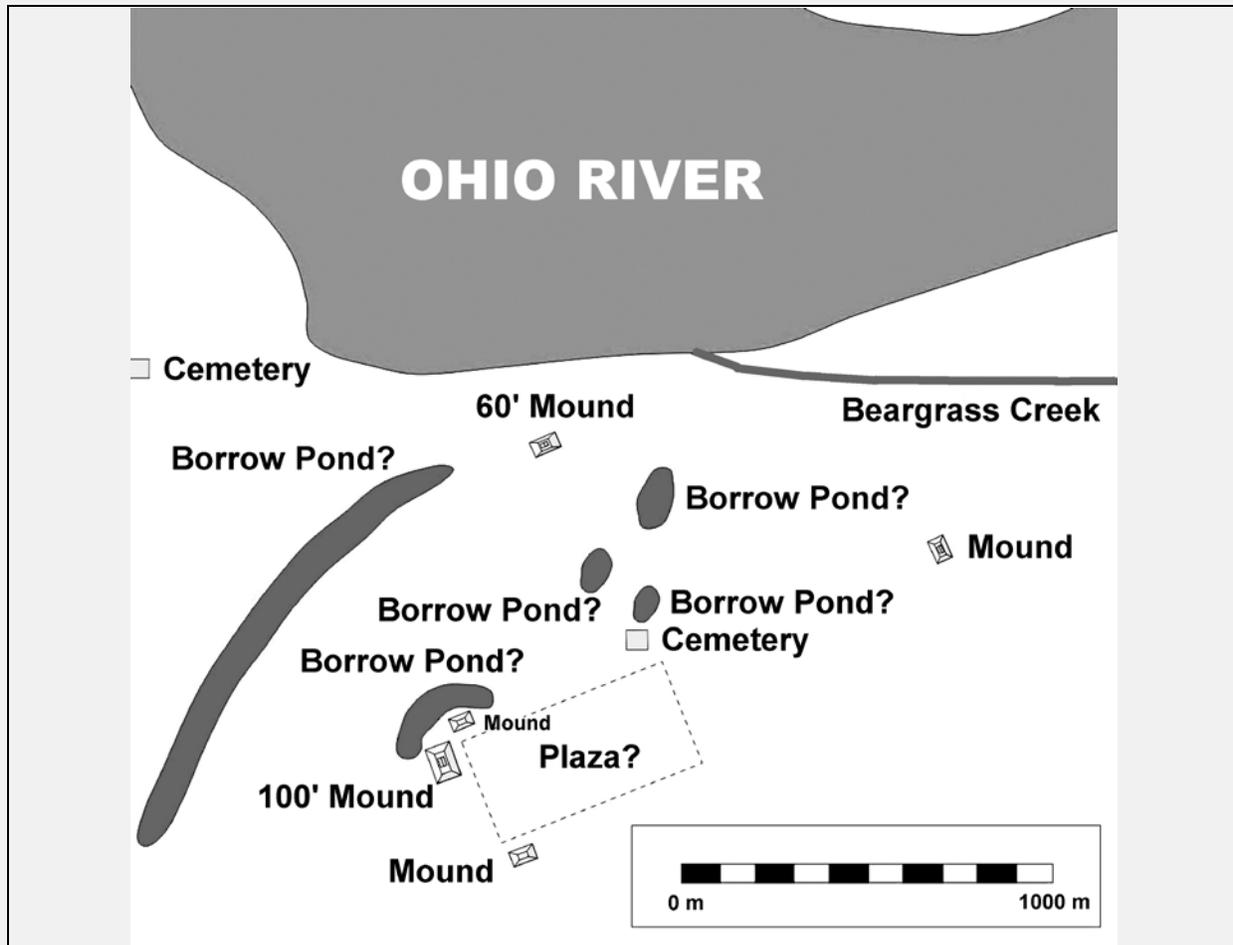


FIGURE 12. HYPOTHESIZED RECONSTRUCTION OF SITE 15JF95.  
(Reprinted with permission from Dr. Joseph Granger)



**FIGURE 13. CLUSTER OF MOUND AND STONE BOX CEMETERY SITES AT THE GREEN STREET SITE (15JF95) THAT ARE DOCUMENTED IN THE ARCHIVES.**

Beginning in the Terminal Archaic, however, and throughout the Woodland period, the higher quality Wyandotte chert was favored over local materials. The use of non-local chert, coupled with low site frequencies and lack of evidence for long-term residential sites (with the exception of the sites mentioned above) indicate a dramatic population decline in occupation in the Falls area. The use of non-local chert suggests a more fluid pattern of resource procurement and high residential mobility, possibly associated with a breakdown in the boundaries between Late Archaic groups. From the perspective of time, it is almost as though the Woodland peoples were simply passing through the area.

This being said, it appears doubtful the Woodland populations in the area were large enough, or present for long enough periods, to have the manpower and social organization required to facilitate the construction of large earthen mounds, or to maintain the ritual and ideological aspects of the culture associated with them.

Interesting enough, during the late prehistoric/Mississippian period, population growth is again signaled by the increase in the number of sites. Long-term, intensive residence is suggested by the number of sites containing significant midden deposits and features. Late prehistoric/Mississippian sites in the Falls area, on both sides of the Ohio River, are numerous and complex, as local collectors and amateurs are well aware. Late prehistoric sites are present in all environmental settings of the area, including floodplain, upland ridge tops, and deeply dissected valleys (rockshelter sites). A range of site types, even a hierarchy of these sites, appears to have present.

Artifact types indicate a wide and varied range of activities associated with habitation. Cemeteries are plentiful. A reliance on nearby resources is once again reflected in the predominant utilization of local materials for stone tool manufacture. Based on a small sample of Mississippian projectiles from sites in the Falls area, it appears that Muldraugh and other local cherts were primarily used in the manufacture of triangular projectile points. Triangles manufactured from Wyandotte chert are found in lower frequencies, particularly from floodplain contexts. Components from rockshelters in the southern portion of Jefferson County along the Floyd's Fork drainage have yielded a mix of chert types, with points manufactured from both Muldraugh chert and Wyandotte examples. These patterns may be related to temporal differences. Regardless, a long-term, established residential occupation at this time is strongly indicated, and supported by archival information and recent data. Of the two cultures, it appears the late prehistoric/Mississippian culture is the best candidate for the mound building that occurred at the Falls.

### **THE QUESTION OF ENVIRONMENT**

Differences in environmental setting are often cited as the rationale underlying the apparent lack of large Mississippian sites, such as Kinkaid and Angel, north of Evansville, Indiana (Black 1967:546). Muller notes that Mississippian settlement in the lower Ohio Valley and elsewhere was linked to specific soil and environmental conditions (Muller 1986:188). Aside from the requirement of broad bottomlands, he specifies four criteria in particular, namely soil fertility; elevation high enough to avoid annual inundation (flood protection); sufficient area to allow support of the minimal settlement unit (that also meets the first two criteria just listed); and location away from the main river channel, perhaps more appropriately stated as location close to low, wet swales, sloughs, and marshlands (Muller 1978:278).

In regards to the soils, Muller comments that the fertile bottomlands best suited for Mississippian centers were commonly associated with specific soil types such as Armiesburg Silty Clay Loam or the related Huntington Silty Clay Loam. While the alluvial bottoms afforded rich soils, the communities required protection from flooding by suitable higher ground or floodplain ridges. In addition, a sufficient amount of ground above the normal annual flooding was important not only for habitation, but because of the dependence upon the floodplain agricultural fields. Furthermore, the bottomlands had to be expansive enough to physically accommodate the components (mounds, houses, fields, cemeteries, etc.) associated with such sites. Finally, there appears to have been a strong relationship between Mississippian adaptation and marshland environments. Waterfowl, fish, and other aquatic wildlife were important resources, along with deer and other mammals that may have been attracted to the bottomlands by the fields of maize. The native vegetation included oak and hickory forest and, importantly, extensive canebrakes (Muller 1978:278; 1986:188).

Muller states that the Falls area was "certainly not the standard environment for Mississippian," and suggests the resources there may have been too marginal to allow a population to concentrate into large communities or for organized groups to expand into the area (Muller 1986:250). It is not surprising at first glance to draw such a conclusion. The floodplain at the Falls today is largely flat and paved over, with major channelization of original streambeds. The floodplain bears little resemblance to that encountered by the early explorers and settlers. If the conditions described in historical accounts of the Falls area are any indication of the environment during the late prehistoric, however, the Falls area was very similar indeed to the "standard Mississippian environment" described by Muller. His four criteria required for an ideal Mississippian environment discussed above are explored below, again drawing from historical accounts.

#### **Soils**

Much of the Falls area at Louisville has not been mapped in detail by the U.S.D.A. Soil Conservation Service. The area of downtown Louisville has been so altered and paved over that soils could not

be mapped based on vegetation. The massive earth disturbance related to urban development precludes the feasibility of taking soil samples. However, much of the area nearest the river and adjacent areas have been mapped. The soils for the floodplain area are of the required fertility that Mississippian cultivators would require; Huntington and Wheeling silty clay soils are common throughout the area. In fact, soils of the Wheeling-Weinbach-Huntington association cover more than half of the Louisville area. The Huntington soils are deep, well drained, and found primarily on terraces. They provide productive cropland (Zimmerman 1966:2).

### **Protection from Flooding**

Historically, the Ohio River was generally low in the summer and early winter before the snow melt, and was higher in the rainy months of spring and late fall. It is reported that a child could wade across the river before it was dammed at Louisville. However, the unimpounded river was subject to episodes of intense flooding over the centuries (Sanders 1991:7, 20). Historically, floods of the late nineteenth century were devastating to the residents of Louisville. This has been exacerbated today by historic modifications, necessitating the need for construction of a floodwall. However, the floodplain at the Falls was not totally flat originally, and offered some areas of relief from flooding to its prehistoric in the form of low ridges. The extensive grading and filling of the Louisville floodplain resulting from urban development has long obliterated all evidence of the natural topography of the area.

A whimsical reflection of the leveling of one Louisville city street serves as an example:

At last, Center Street [now known as Armory, between 5th and 6th Streets] has come to judgement. Its nooks and crannies are no more. Its gullies and valleys, its hilltops and "hogbacks" are to vanish, verily from the face of the earth, or rather, from the surface of the street [Anonymous 1922].

The U.S.D.A. Soil Survey for Jefferson County describes the floodplain as follows:

It consists of broad, nearly level ridges that have narrow side slopes running down to the bottoms along small branches. The branches are mostly parallel to the Ohio River and form a dominant drainage pattern. The [Wheeling-Weinbach-Huntington] association thus consists of long narrow strips that are parallel to the drainage system. Most of the gently sloping or sloping areas are well drained, and the level or nearly level are mostly moderately well drained or somewhat poorly drained [Zimmerman 1966:2].

Speaking of Jefferson County, McGrain and Currens report:

To the casual observer, the details of the topography are obscured by the extensive urban and suburban development. Although locally appearing flat, it is essentially a gently southwestward sloping surface from a high of 790 feet on the east to 500 feet at the foot of the knobs in the southwest part of the county. The lowest elevations are found along the Ohio River. Elevations along the flood plain are 430 to 440 feet; terraces 20 feet higher may be present in some areas [McGrain and Currens 1978:41].

Adjacent to the floodplain to the east is an area known today as the Highlands. It is situated about 55 feet (17 m) above the floodplain. Numerous caves and sinkholes formed through erosion in the Paleozoic bedrock underlying the Highlands. These were used by early historic residents, and, presumably, prehistoric ones as well. It is known that this area offered haven to nineteenth and early twentieth century Louisvillians during times of severe flooding [Spetz 2001:334].

### **Expansive Floodplain**

It has been remarked that a sufficiently expansive floodplain for such a town along the Ohio River north of this location precludes such development. A sufficiently expansive floodplain for large Mississippian towns north of Evansville, Indiana and the closest large Mississippian center is not

encountered *until* the Falls of the Ohio. The overall terrain along the Ohio River between Louisville, Kentucky and Tell City, Indiana (northeast of Evansville) contrasts with the glaciated portion of the valley that extends from Tell City (river mile 725) to Cairo, Illinois on the Mississippi River (river mile 981). The latter is characterized by broad, extensive alluvial bottomlands that often exceed several kilometers in width, and behind which lie low, rounded hills.

The Falls area lies at the northern extremity of what is known as the constricted Ohio River Valley, which comprises approximately 100 river miles (or 161 km) from just south of Louisville (river mile 625) to Tell City (river mile 725). This portion of the valley was never glaciated. The constricted Ohio River flows through several physiographic regions, including the Outer Bluegrass, the Knobs, and the Mississippian Plateau in Kentucky, and the Norman Upland, the Mitchell Plain, and the Crawford Upland in Indiana. Archaeologists have noted that the Falls area does not hold together physiographically; Granger and Janzen, for instance, have reported that as many as six microenvironments may be found around the Falls (Granger et al. 1981; Janzen 1978).

The Mississippian Plateau region of Kentucky, also called the Pennyroyal, is the largest geologic area of Kentucky, making up 30 percent of the state (Bladen 1984) and is consequently varied in terms of its physiography. The study area lies within the Big Clifty section of the plateau, and is composed of a belt of sandstone that encircles the Western Coalfield region. Its outer edge is the Dripping Springs escarpment, which rises 46 to 91 m above the Mississippian Plateau. The inner edge is bounded by the western Pottsville escarpment. The area is underlain by Mississippian sandstones and limestones. The upland consists of a hilly, rugged terrain containing numerous rockshelters that would have been ideal for prehistoric utilization. The hills are dissected by numerous streams, creating narrow, flat bottomlands that widen as the streams enter the Ohio River.

Across the Ohio River in Indiana, the Crawford Upland is generally similar in age and relief to the Mississippian Plateau in Kentucky. It is a dissected plain where local relief is due to stream action, which has downcut the sandstone and shale bedrock. Elevations in this area range from 107 to 299 m (351 to 981 feet) above mean sea level (MSL). Ridge tops can be found that are both broad and sharp, with slopes that are gentle or steep, and valleys that are broad or narrow. The area also contains penplain remnants, along with caves and sinkholes. The major streams in the area are the Little Blue River and Patoka Creek.



**FIGURE 14. OHIO RIVER VALLEY SHOWING FLOODPLAIN AREAS.**

The constricted portion of the valley is dominated by a floodplain swell-and-swale topography, discontinuous linear terraces of the Ohio River, and the adjoining steep upland. Elevations range from 121 m (397 feet) above MSL at the floodplain, to 128-134 m (420-440 feet) above MSL at the

terrace remnants, to over 275 m (902 feet) above MSL in the upland. The river is entrenched in a narrow, deep, sinuous, and gorge-like valley with relatively few floodplains or bottomland pockets. These bottomlands are generally less than one kilometer in width, but may reach two kilometers (Ray 1974:3). They are usually restricted to one side of the river or the other, with steep bluffs rising from the water level on the opposing side. In the 100 river mile (or 161 river km) stretch between Louisville and Tell City (northeast of Evansville) that comprises the constricted portion of the valley, approximately 20 of these restricted bottomlands may be found (**Figure 14**).

### Marshland Environment

Muller and others have noted an association of Mississippian settlement with marshlands. According to historic accounts, the floodplain at the Falls was once a veritable wetland. Casseday reports specifically on the early environmental conditions of what is now the Louisville area. The area was low and wet, with many ponds and marshes:

The whole of the present site of the city at that early day was intersected with ponds of stagnant water. The second bank had something of a descent towards the interior, and the soil, though alluvial, was of sufficient tenacity to retain the water which fell in rain. The result was that the whole of this valley from Beargrass to Salt River was filled with these ponds; and, as a necessary consequence, miasmata were bred, which produced a great deal of sickness, especially with strangers [Casseday 1852:48-49].

The most important of these ponds was named the Long Pond. It extended from the corner of Sixth and Market Streets to the southwest as far as Sixteenth Street (Casseday 1852:50). Another historically documented pond, mentioned above, was known as Gwalthmey's or Grayson's Pond. It was full of clear water, and surrounded by lofty trees. It was filled with fish, and was commonly used as a skating rink in winter (Casseday 1852:51) (see **Figure 13** above).

Besides these two principal lakes, there were innumerable others, some containing water only after heavy rains and others standing full at all times. Market Street from the corner of Third down was the site of one of these; Third Street between Jefferson and Green of another; Jefferson Street near the corner of Fourth of another, and so on almost *ad infinitum*. A map of the city as it was sixty or even thirty years ago, would present somewhat the appearance of an archipelago, a sea full of little islands (Casseday 1852:51-52).

From another source, it is said that:

Ponds of one sort or another, it might be mentioned, were once a very conspicuous feature of the topography of the city. They were everywhere and some of the better known of these ponds persisted until fairly recent years...I have often heard it said, although I have never had the experience, that one could skate with few interruptions, from the "Junction" clear across to the river, by following the chain of ponds and runs to the south of the city [Taylor 1933].

It is also stated that:

In 1821, Mr. Grayson, exercising his prerogative as lord of the manse, began to fill in the lake with earth taken from the [Indian] mounds there arose protest, long and loud, but it availed the protestants naught. The mounds yielded many relics of the mound builders, including arrow heads, axes, human bones and war clubs [Anonymous 1926].

The protest arose, not from the leveling of the mounds, but from the filling of the lake, known locally as Grayson's Pond. While many of the ponds present in the Louisville area were breeding grounds for mosquitoes, Grayson's Pond was a popular recreational area, a beautiful clear lake filled with fish.

The Falls area, and Louisville in particular, was considered an unhealthy place before historic improvements in the early nineteenth century. A disease known as "the bilious complaint" spread throughout the city in what came to be called the Great Epidemic of 1822. It was considered so

terrible as to be called "yellow fever." The disease had occurred in the area as early as 1779, but grew to such proportions during the early nineteenth century that the city was given the title of "The Graveyard of the Ohio (or South)" (Chenault 1962:76). The *Louisville Public Advertiser* published a regular "Register of Deaths" listing the disease, age, and nativity of all the deceased.

During 1822-1823, the city trustees set about in earnest to make the city healthier. Because of the health risks, the floodplain was drained, and the pools were filled. Areas of higher ground were leveled for fill dirt. And with the leveling of the ground, the prehistoric mounds were lost. These important traces of the late prehistoric presence at the Falls fell to "the energy of the inhabitants" in their efforts to drain the city (Casseday 1852:50). And so, the mounds of the Falls area passed from memory, and few archaeologists are aware that they were ever there.

Granger has suggested that the proximity of the small ponds to the known mound sites may indicate that these were aboriginal borrow pits excavated during mound construction (Granger n.d.). While this cannot be determined at the present time, it is interesting to note that an 1819 map of Jefferson County shows a series of small ponds concentrated in the same location as that of the large mound complex described above (**Figure 15**). However, the large numbers of ponds reported in the area lessens the probability they were all borrow pits.

Concerning the other natural resources of the Falls area, Guernsey says that:

Nowhere in Indiana, or perhaps anywhere upon the Ohio, was there a more advantageous location for prehistoric occupancy. There was a remarkably abundant supply of fish-food and of the numerous species of edible molluscae, which persist to this day. Below the "falls" a glacial lake some 15 miles long was the habitat of great colonies of waterfowl. There were perhaps 100 other smaller lakes existent a century ago. The extensive "knobland" forests abounded in deer, elk, bear, and other wild game. Beyond this the river terraces were here quite elevated and level, and the rich sandy loam was exceptionally fertile [Guernsey 1939:27].

Guernsey concludes from his investigations that the prehistoric occupants of the Falls area were "lake dwellers" rather than the "customary occupants of villages established upon stream terraces." He also expressed his belief that the course of the Ohio had changed over the years, that the islands had once been part of the mainland, and that many of the prehistoric villages had been swept away by the floods (Guernsey 1939:27).

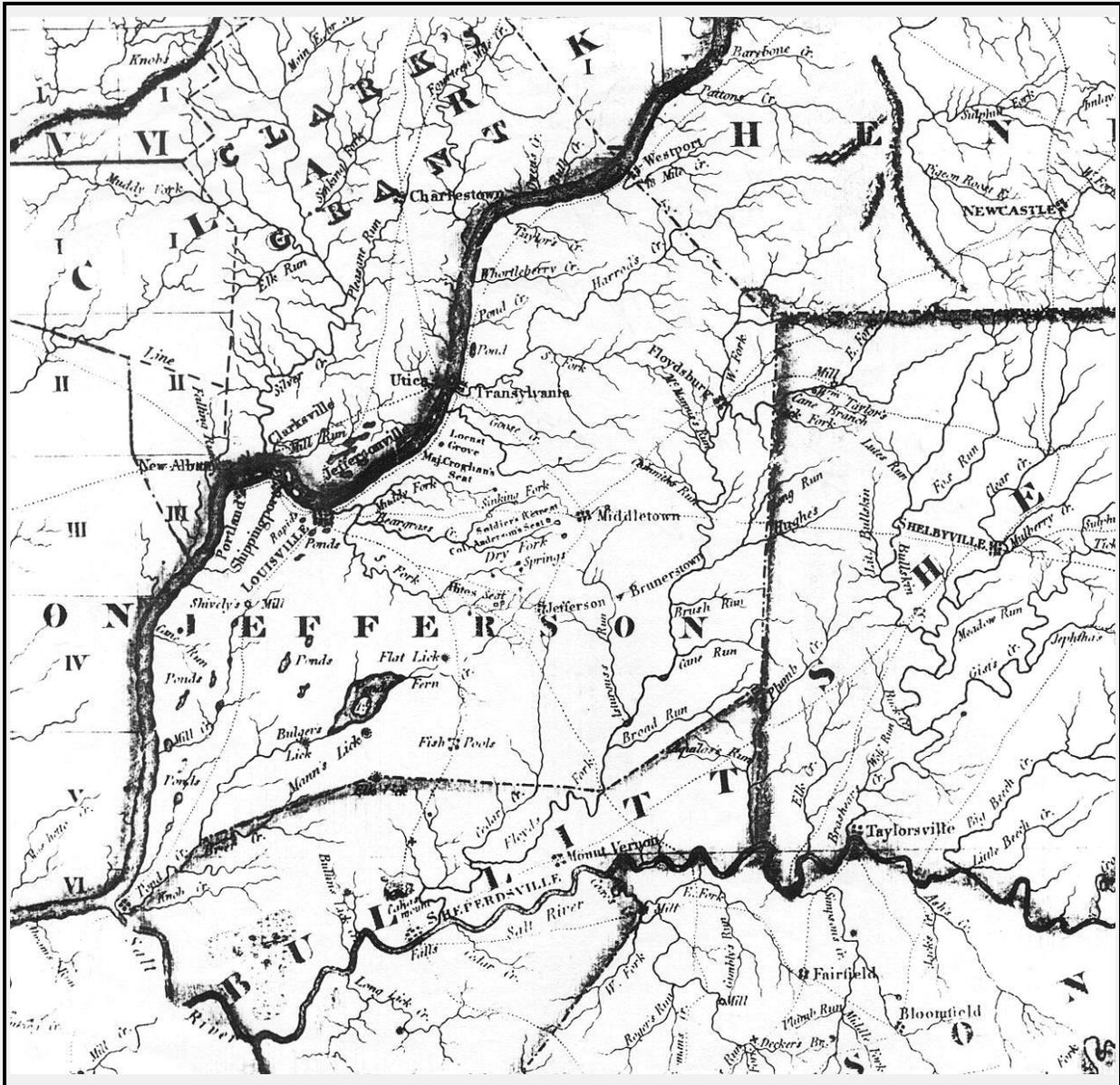
Muller particularly remarks on the availability of cane in the lower Ohio Valley Mississippian sites. He observes that these canebrakes may have been the result of agricultural clearing by Mississippian farmers, or may have been in place on the fertile bottomland ridges beforehand (Muller 1986:190). The Falls of the Ohio, as was much of Kentucky, was also noted for its cane, the abundance of which led to the naming of such creeks as Cane Run Creek in western Jefferson County. One early pioneer named Stephen Shelton left this account in relating an incident with the Indians:

At Louisville was the greatest world of cane I ever saw. Some I know [was] full 30 feet high. All the level places were covered with this cane [The Draper Manuscripts, as quoted in Hammon 1978:153].

Nor was the cane restricted to the Kentucky side of the river. From a report in the Silver Creek township of Floyd County, Indiana, it is said that:

Lick Run empties into Cane or Caney Run. This stream gets its name from the amount of cane which grew upon its bottoms many years in the past [Ford and Ford 1882:358].

Today, in low-lying areas, cane still grows tall and thick along many areas of the city, notably along the Beargrass Creek.



**FIGURE 15. 1819 MAP OF KENTUCKY SHOWING JEFFERSON COUNTY PONDS.**  
(Map of Kentucky and the Northwest Territory published by Luke Munsell)

### The Upland Adjacent to the Falls

Evidence of late prehistoric habitation is not restricted to the broad Ohio River floodplain at the Falls. A second loci of intense late prehistoric occupation was the uplands east and south of the Ohio River along the South Fork of Beargrass Creek in the area of present day Jeffersonton in eastern Jefferson County. In 1932, Webb and Funkhouser (1932:200) report that "according to tradition," a large village site (15JF 9) was once located near the present site of Jeffersonton, on Beargrass Creek. Graves, mounds, and large numbers of artifacts, including broken pottery, flint, and shell, were common finds. They claim that the site was well known and was reported by numerous people. A newspaper account of 1965 states:

The high fertile ground of the Jeffersonton area, far removed from the swampland at the Falls of the Ohio, was a natural magnet for settlers [Sinclair and Browning 1965].

Young (1910:29) reports that a very large stone box cemetery was once located on property owned by one Mr. Armstrong. This property was located "along the Bardstown Turnpike six miles out of Louisville in Jefferson County." The ground had long been cultivated, but a "few strokes of the spade or the grubbing hoe" would turn up human bones at any point, along with arrowheads and fragments of pottery. An 1879 map of Jefferson County shows two Armstrong farms about "six miles out" on the Bardstown Pike, however (Beers and J. Lanagan 1879). They are in proximity to each other, but one is located within the drainage of Fern Creek, while the second is in the drainage of the South Fork of Beargrass Creek. The former is located near the site of the present day Rest Haven Cemetery; the latter lies less than 2 km (about a mile) away along Hikes Lane (**Figure 16**).

A 1930 newspaper article supports the northern-most of these locations, on Beargrass Creek, as the probable prehistoric cemetery. This story relates the finding of a prehistoric burial on a dairy farm at Hikes Lane (Eschrich 1939). According to the account, what appears to be a flexed burial was found on the Schneider (Snyder) farm. Numerous "flints, stones, and pottery shards" were recovered nearby. The Schneider's claim, however, that "elk horns, bits of turtle shell, ornamental bear teeth, teeth of other animals, mussel shells, bones and bits of pottery" were also found in the grave, along with a gorget found on the chest of the skeleton. The site was located atop a long ridge in "extremely fertile soil." A large capacity spring and small cave were located nearby. A midden was easily recognized by the landowners as a deposit of dark soil. The site was visited by Lucien Beckner, a former geology professor at the University of Louisville, who concluded that the site was a burial ground associated with a village that occupied the high ground around the spring. The 1879 Beers and Lanagan map this spring, at the Snyder farm, adjacent to the Armstrong farm (**Figure 16**). Recent professional and amateur investigations, described below, also support the Beargrass Creek location for the Armstrong Farm described in Young (1910).

## RECENT RESEARCH

Over the past five years, there has been more solid information generated on the late prehistoric occupation of the Falls area. Three loci of investigation in particular have been conducted since 1996, including the upland along Six Mile Lane in the Beargrass Creek drainage of central Jefferson County; the Miles Rockshelter on Cedar Creek, a tributary of Floyd's Fork in the southernmost portion of the county; and the Ohio River floodplain near downtown Louisville (**Figure 17**). Additional work, slated for July and September 2003, is planned at the Prather Mound Site in Clark County, Indiana.

### Six Mile Lane

Over the past few years, the development of the Hurstbourne Parkway corridor in eastern Jefferson County has accelerated, adversely impacting well-known and historically significant structures and estates along with unrecorded prehistoric resources. One area, in particular, near Six Mile Lane has been drastically affected. This section of the Hurstbourne corridor, between Taylorsville and Bardstown Roads, was reportedly developed with seventeen million dollars of public money without the requirement of prior environmental or cultural studies. The area, between Fern Creek and the South Fork of Beargrass Creek, has now been developed beyond recognition, and as a result, several late prehistoric sites have been lost. Of these, two are worthy of some discussion. Sites 15JF650 and 15JF651, once located along scenic agricultural Six Mile Lane, produced abundant late prehistoric materials. Surface collections were gathered by amateurs and collectors from these sites as the area was developed. Although diagnostic artifacts from all prehistoric periods were recovered, the assemblages are dominated by triangular projectile points and small, weathered potsherds (**Figures 18 and 19**). A small prominence, referred to locally as a mound, was associated with these sites. While it is not unlikely this was a natural knoll rather than a plow-deflated mound, the area does lie in the vicinity reported by Webb and Funkhouser that reportedly contained numerous mounds and a village (Webb and Funkhouser 1932). The 1907 (reprinted 1941) USGS 15' minute topographic quadrangle does depict several features in this vicinity that could be mounds.

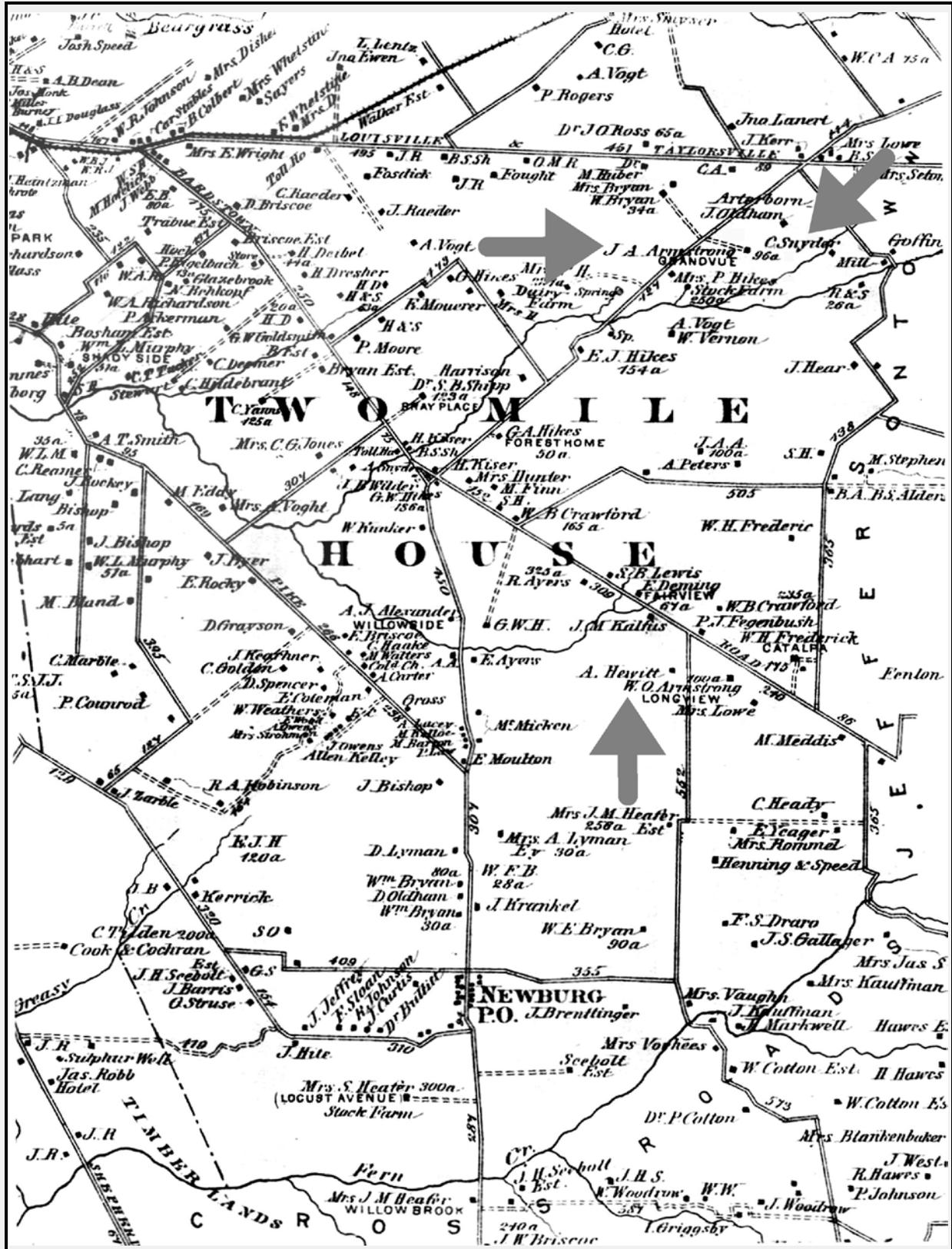


FIGURE 16. 1879 BEERS AND LANAGAN MAP SHOWING THE PROXIMITY OF THE ARMSTRONG AND SNYDER FARMS.

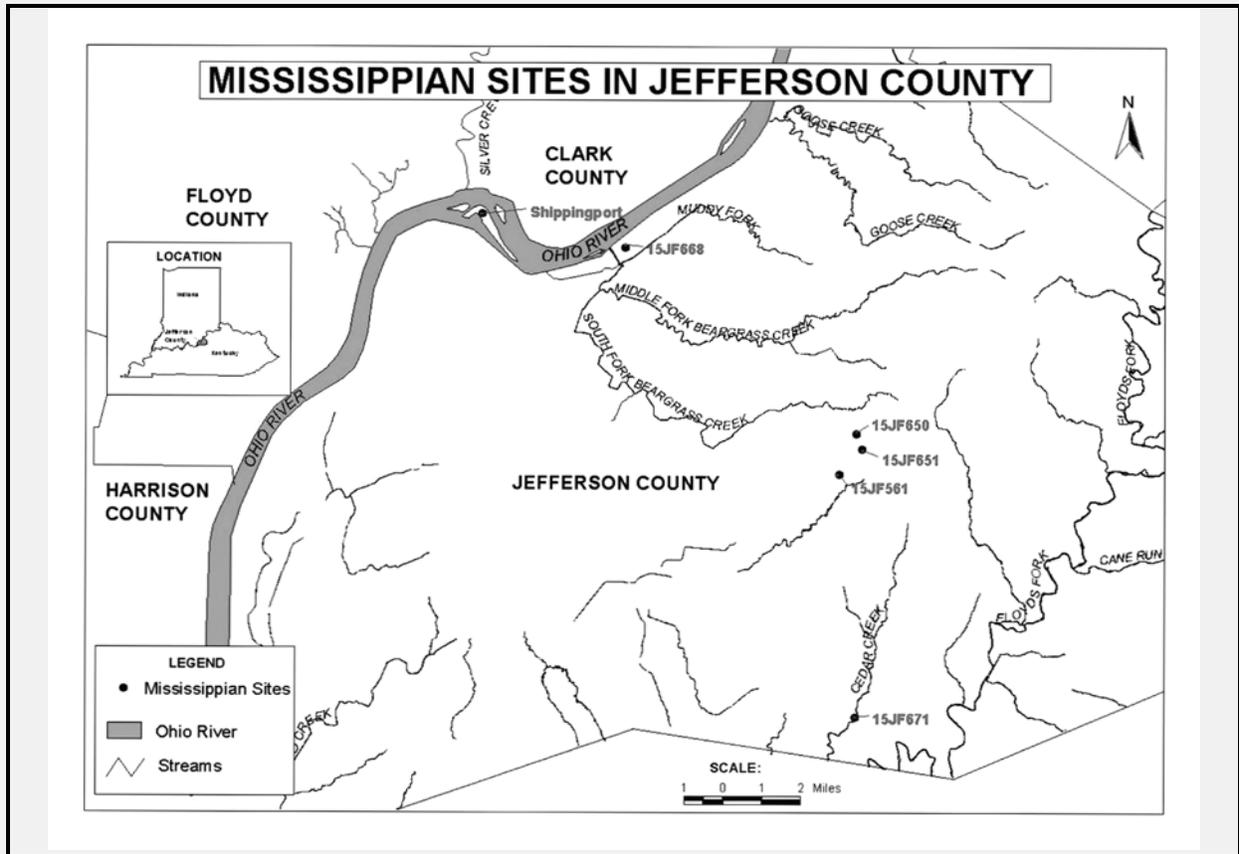
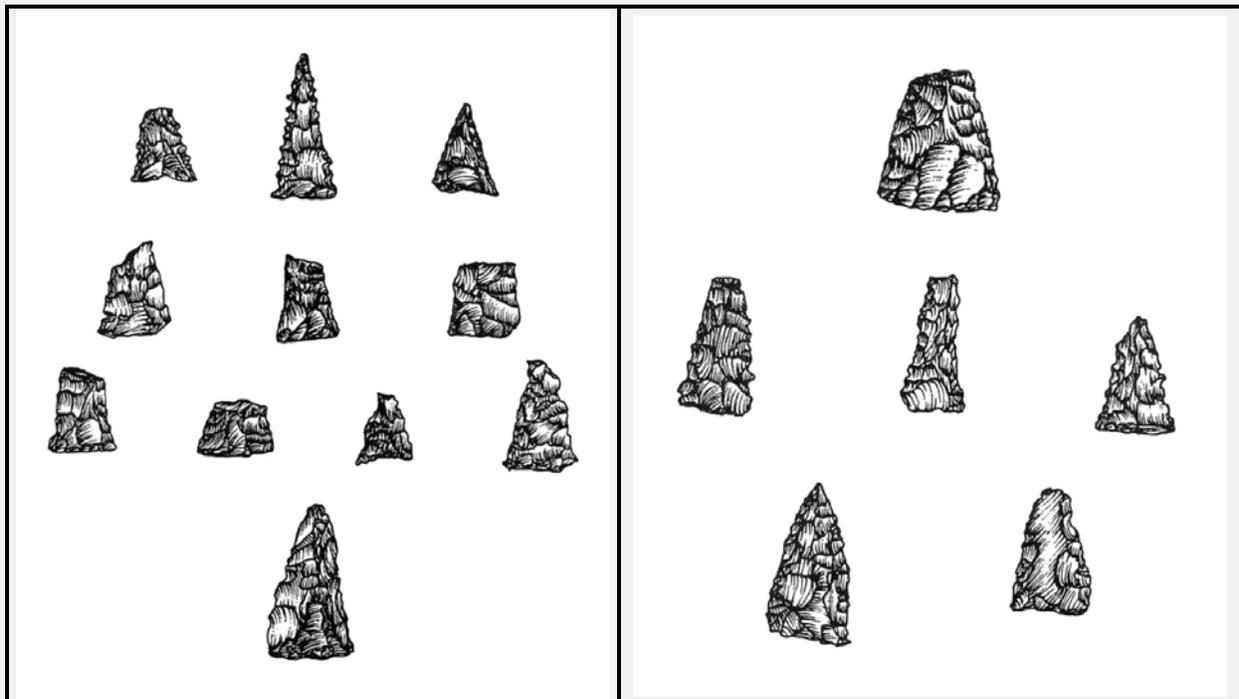
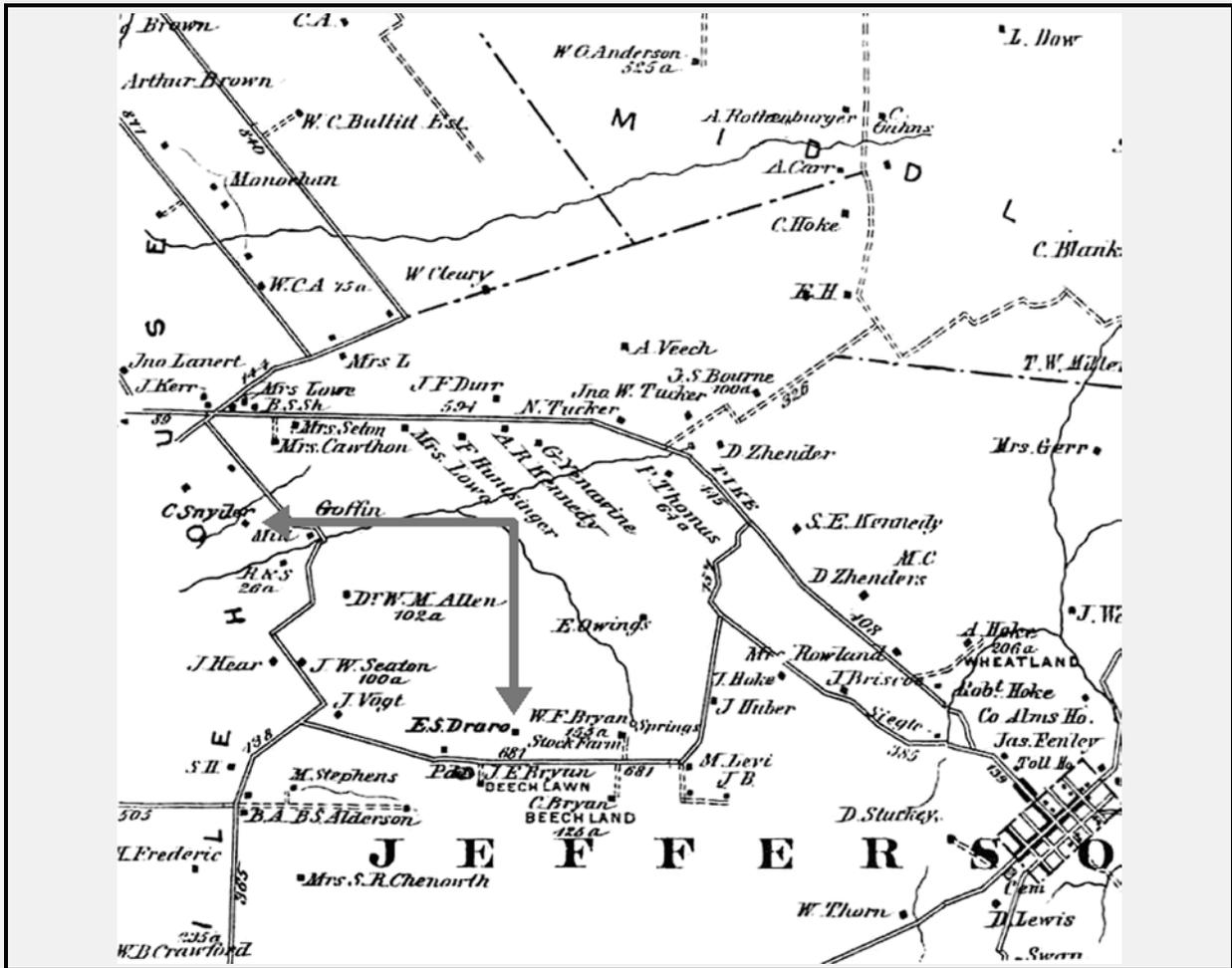


FIGURE 17. RECENTLY INVESTIGATED SITES AROUND THE FALLS.



**FIGURE 18. TRIANGULAR PROJECTILE POINTS FROM SITE 15JF651.**

**FIGURE 19. TRIANGULAR PROJECTILE POINTS FROM SITE 15JF650.**

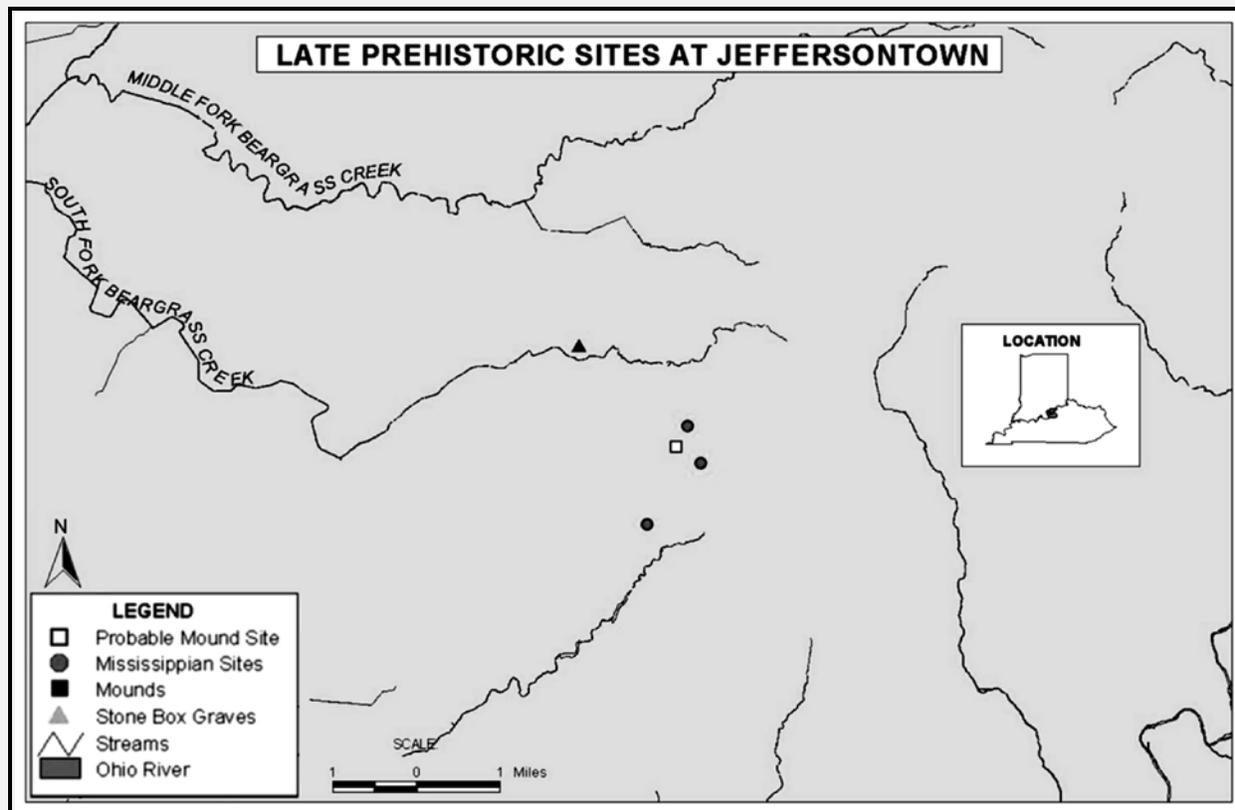


**FIGURE 20. 1879 BEERS AND LANAGAN MAP SHOWING RELATIONSHIP OF SNYDER FARM TO THE DRAVO FARM.**

Other investigated sites in the immediate vicinity have also yielded triangular projectile points. Site 15JF561 was discovered in 1989 during a Phase I survey along a proposed gas line right-of-way. In 1990, a Phase II investigation was conducted at this site by Archaeology Resources Consultant Services, Inc. (Bader and Stottman 1992). Most of the material recovered from the site was prehistoric lithic debitage. The only diagnostic artifact recovered at that time, a triangular projectile point resembling a Madison type (Justice 1987), was found. It was noted at the time of the Phase II investigation that the main portion of the prehistoric component of the site was likely to be found elsewhere, to the east and the north, beyond the project area confines. This is precisely where sites 15JF650 and 15JF651 were found some five years later.

The area along the South Fork of Beargrass Creek appears to be one of unusually high prehistoric site density. Although no sites had been officially recorded with the Office of State Archaeology between Fern Creek and the South Fork before the documentation of site 15JF561, collectors have long been aware of the almost continuous occurrence of artifacts. This is true to the extent that it was difficult to distinguish where one site began and another ended. The three sites yielding late prehistoric materials, along with a fourth, located just to the north on the Dravo Farm, likely represent hot spots or artifact concentrations, rather than distinct sites. The site was likely very large. If the account of numerous mounds at the site of

present day Jeffersontown can be believed, the density of prehistoric occupation in this area should not be surprising. Situated on a broad upland ridge, elevations ranged from 520 feet (158.5 m) MSL along the bottoms to 700 feet (213.4 m) MSL on the ridge tops. The area is well watered, with numerous springs feeding the Beargrass. The generally wide, shallow Beargrass enters a deep gorge just north of this site; a cavern system reportedly follows this route from Taylorsville Road to Bardstown Road in the city of Beuchel, where rock outcrops, containing local Harrodsburg chert, are exposed.



**FIGURE 21. LOCATION OF POSSIBLE MISSISSIPPIAN SITE(S) ON THE SOUTH FORK OF BEARGRASS CREEK ALONG SIX MILE LANE.**

It is intriguing that the series of sites along Six Mile Lane are geographically very close to the stone box cemetery reported by Young (1910) on the Armstrong and Snyder (Schneiter) farms referred to above. **Figure 20** depicts the location of the Snyder farm (at the left margin of the map) to the Dravo farm. Sites 15JF561, 15JF650, and 15JF651 were located just south of the Dravo farm. This suggests the occupation of this area was indeed very extensive. **Figure 21** shows the relative locations of these sites.

### **The Miles Rockshelter (15JF671)**

The Miles Rockshelter (15JF671) was discovered during a Phase I survey in 1998 by Joseph Granger Consultant (Bader et al. 1998) (**Figure 22**). Subsequent Phase II investigations at this shelter in 1999 revealed stratified deposits to a depth of nearly six feet (1.8 m). Phase I and Phase II excavations revealed six principal occupation zones. The primary occupations were Late Archaic and Mississippian, although Middle Archaic and Early Historic period components were also present. One broken Clovis point was recovered from disturbed context. A second complete fluted point was found by collectors in the field outside the shelter. Middle Archaic remains are present in the lowest levels of the cultural deposits, and an engraved bone pin was found, similar to those recovered from the KyANG Site (15JF267) at what is now the Louisville International Airport, and at

midwestern sites. Late Archaic projectile points are commonly-found stemmed types, including McWhinney, but several examples appear to be exotic, resembling Sedalia from southern Illinois. Faunal preservation is exceptional. The Woodland period is conspicuously absent, although cord-marked potsherds were recovered. More to the point of this argument, the Mississippian component yielded eighteen triangular projectile points (six from amateur collections), shell-tempered ceramics, and faunal remains. A large fragmented portion of what may be a water bottle was also found. Most of the twelve Mississippian projectile points recovered from this site from provenienced context were made from local Muldraugh chert (**Figure 23**). The analysis of the artifacts from this shelter is ongoing.

This site is located 30 m west of Cedar Creek, a tributary of Floyds Fork, which in turn drains into the Salt River (**Figure 17**). A restricted floodplain lies between the shelter and the stream, with adjacent somewhat broader bottoms nearby. The shelter itself faces east along a northeast-southwest bluff line. Above the shelter, the area is characterized as broad rolling ridge tops. It is karsted, with a system of sinkholes and underground drainage passages that allows water to flow through the shelter from above.



**FIGURE 22. THE MILES ROCKSHELTER.**

Numerous other such shelters are known to exist on privately owned land along Cedar Creek, Floyd's Fork, and other streams in southeast Jefferson County, some 19 km due south of the Falls proper. Access to the area, however, was probably from the southwest from the Ohio River some kilometers below the Falls inlands along the Salt River and tributaries. The Miles Rockshelter Site is located little more than one mile east of the well-known McNeeley Lake Cave/Durrett Cave/Cooper Cave complex on Pennsylvania Run, and has yielded similar artifacts.

The Miles Rockshelter Site is highly significant from several perspectives. First of all, many---if not all---of the rockshelters in this part of the Falls area have been severely looted. While the Miles Rockshelter has also been the target of pothunters, a large portion of intact deposits remains. Phase II excavations were fairly limited, and revealed that looter disturbance was restricted to the drip line. There remains ample undisturbed site area for further study.

Secondly, this site, and others like it nearby, is located in the deeply dissected inland valleys of southern

Jefferson County along tributaries of the Ohio River. The examination of Mississippian occupation of this topographic setting, as opposed to more commonly encountered broad floodplain sites, offers a unique opportunity to study other aspects of the Mississippian hierarchical settlement system and land use.



**FIGURE 23. TRIANGULAR PROJECTILE POINTS FROM THE MILES ROCKSHELTER.**

### **The Ohio River Floodplain**

Two sites, in particular, have recently been in the spotlight. Both sites are located in the vicinity of downtown Louisville on the Ohio River floodplain and terrace. These sites, or portions of them, were somehow preserved amidst the urban development of the city. Both sites are clearly Mississippian, but appear to offer unprecedented evidence of interaction with the Fort Ancient culture to the northeast.

### **The Eva Bandman Park Site (15JF668)**

Located on an Ohio River floodplain terrace, this site was found by the Kentucky Transportation Cabinet in 1998, during the planning stages for the widening of River Road. It is one of the few Mississippian period components known to remain in the Louisville area, and is one of even fewer that have been professionally investigated. In 2000, Dr. Chris Begley of the University of Kentucky completed Phase II excavations at site 15JF66, the Eva Bandman Park Site, in Jefferson County (**Figure 17**). Dr. Begley has represented this late prehistoric site as one situated at the interface of the Mississippian and Fort Ancient culture areas (Begley 2000). In 2003, Andrew Madsen of the University of Kentucky returned to the site for Phase III data recovery (Poynter 2003).

One of the more unique and exciting findings about this site is, that while Mississippian, it appears to share traits with the Fort Ancient culture to the northeast. Of the more than 2,300 ceramic sherds recovered during the Phase II research, attributes of both Mississippian and Fort Ancient culture were observed. While the ceramics are clearly Mississippian in form (i.e. bowls, salt pans, jars, and plates), Fort Ancient decorative styles are evident on these vessels (Pollack et al. 2002:210).

Elsewhere in Kentucky, on Fort Ancient sites, evidence of Fort Ancient/Mississippian interaction has been noted, for instance, in the presence of Mississippian iconography carved on marine shell ornaments (Pollack 2002:216). However, the Eva Bandman Park Site represents one of the few cases known where Fort Ancient artifacts are present, or there is evidence of Fort Ancient influence, at a Mississippian site (Pollack et al. 2002:210). Undisturbed features and post molds indicative of

structures were also found at the site. Floral and faunal evidence also suggests a more Fort Ancient type subsistence pattern (Pollack, personal communication, 2002). The future analysis of the materials recovered from the Eva Bandman Park Site, located to the west and on the periphery of what was likely a major Mississippian center at the Falls, promises to shed light on the nature of the Mississippian/Fort Ancient relationship in this area.

### **Shippingport Site**

In September 2002, the U.S. Army Corps of Engineers, Louisville District, made a discovery on what is commonly called Shippingport Island at the Falls (**Figure 17**). The site was discovered during ongoing construction for a new lock at McAlpine Locks and Dam. The finds included artifacts dating to the Mississippian period, such as shell-tempered ceramics representing various vessel forms including bowls and salt pans, in addition to jars. Triangular projectile points have also been found. Mussel shell and animal bone indicate excellent preservation at the site.

This site is very important to achieving an understanding of Mississippian life ways at the Falls. As with the case of the Eva Bandman Park Site, this one of the very few remaining sites of the period remaining at the Falls, making it's significance even greater. The site is located in a proximal location to the actual Falls of the Ohio River, in reality a series of low rapids, and several islands. As suggested in this paper, at least two possible mound sites were located on islands in the immediate vicinity of the find. The central location of this site between the large mounds on the expansive floodplain of what is now Louisville, Kentucky and the extensive sites (Old Clarksville and Newcomb) known on the Indiana shore heightens the intrigue and increases the potential for gaining new insights into this little-known aspect of Falls prehistory. (For more on this discovery, see Keeney and Hemberger, this volume). Systematic study of the site is planned in the near future by the U.S. Army Corps of Engineers.

### **The Prather Site**

Current Mississippian investigations are not restricted to Kentucky. During July and September of 2003, Ms. Cheryl Munson and Dr. Robert McCullough plan to investigate the Prather Mound Site in Clark County, Indiana. These scholars, who have built their reputations on studying the late prehistoric period of Indiana, have recently obtained grant money to conduct a multi-year investigation of the site, commonly believed to contain one of the last flat-topped mounds in the area. In addition to revisiting data collected from former studies at the site, they hope to prepare a topographic map the large site, to investigate site structure and boundaries, and eventually, to conduct block excavations of principal features such as houses, storage areas, plazas, and stockade walls. The proposed series of investigations will complement investigations in Kentucky, and will provide information regarding upland Mississippian adaptation in the area.

## **CONCLUSIONS AND AVENUES FOR FUTURE RESEARCH**

There are numerous areas of potentially fruitful research that immediately come to mind regarding the Mississippian sites at the Falls. Among the many potential areas of inquiry possible, several are intriguing.

- 1. The relationship between Mississippian and Fort Ancient cultures.** Sharp has said that the assignment of late prehistoric sites to the Mississippian or Fort Ancient periods in the Falls area is largely determined on the research orientation of the investigator (Sharp 1990:475). Often, the distinction is based on geographic area and similarity of environmental or physiographic conditions. Large Mississippian sites are generally situated on broad alluvial floodplains. Fort Ancient sites, on the other hand, tend to be located along major river systems, but not necessarily in the bottomlands (Sharp 1990:470). Sites in the upland areas east of the Falls of the Ohio area are commonly assigned to the Fort Ancient affiliation, while those of the floodplain of the Ohio River in the west and southwestern portions of the state are labeled "Mississippian"

(Figure 24). Sharp suggests that the Knobs region separating the Outer and Inner Bluegrass regions may have been the "boundary" between Mississippian and Fort Ancient adaptations (Sharp 1990:476). Others place the westward extent of Fort Ancient to the Salt River drainage (Pollack et al. 2002:207). Still others seem to base the division between the two on river drainages, with sites in the Kentucky River drainage considered Fort Ancient, and sites within the Cumberland River drainage Mississippian. Recent research suggests the nature of Fort Ancient/Mississippian interaction may have changed over time (Pollack et al. 2002).



FIGURE 24. THE APPROXIMATE MISSISSIPPIAN/FORT ANCIENT INTERFACE.

2. **The relationship of Mississippian sites in the immediate Falls area, notably the Prather Mound Site and related nearby components to other regional Mississippian groups.** Research into the degree of interaction and affinity between the Prather Complex/Falls sites and other Mississippian sites to the south and southwest, including the Peter Creek Complex centered at the Jewell Site at Barren River Lake near Glasgow, Kentucky and the Angel Mound Site in Evansville, Indiana is sure to be a fruitful area of investigation. The role of the Falls sites within the overall regional Mississippian sphere of influence is an area that can reasonably be addressed by future research.
3. **Mississippian settlement patterning and land use at the Falls.** The fact that sites at the Falls containing late prehistoric components have been found in a variety of topographic settings (floodplain, upland ridge top, and deeply entrenched tributary valleys) suggests the very real potential to investigate Mississippian site hierarchy and land use during this time. While much of the major mound building aspects of Falls Mississippian has been lost (with the possible exception of the Prather Site), ample research material still exists to examine multiple aspects of Mississippian settlement.

It is a well-worn and all too obvious conclusion to say that additional research is needed in this area. Instead, recommendations for potential areas for that research to be conducted are offered. Recent professional investigations have demonstrated that late prehistoric remains at the Falls can still be found, and furthermore, can be found within a variety of diverse environmental settings, including the floodplain of the Ohio River, the broad, upland interior ridge tops, and the deeply entrenched tributary stream valleys containing numerous rockshelters. These sites are found within seemingly unlikely urban areas near the heart of downtown Louisville, in remnant suburban pockets on large, privately owned landholdings, and in the rough, comparatively wild, undeveloped stream corridors peripheral to the urban sprawl. There are five topographic settings in which to direct this future research:

- 1. Downtown on the floodplain/terraces at Louisville proper.** The finds at Shippingport and site 15JF668 indicate that Mississippian sites can still be found in this area, generally thought to be too extensively disturbed for finding any intact remains.
- 2. The Ohio River islands.** The islands in the Falls area have been virtually unexplored. A rich ceramic-bearing midden indicative of a late prehistoric component is known to exist at the south end of Six Mile Island across from the Clark Maritime Center in southern Indiana. Twelve Mile Island and Eighteen Mile Island are also likely candidates to contain late prehistoric remains. Flint Island, in Meade County downriver, is a touted Mississippian site that has seen next-to-nothing in the way of professional investigation.
- 3. Broad upland ridges of central Jefferson County.** In the central portion of Jefferson County, there are still large undeveloped tracts of land adjacent to the Beargrass Creek on broad upland ridge tops. These are in the hands of private and commercial landholders, but opportunities may arise to focus investigation in these areas. Late prehistoric artifacts have also been found at historic Farmington and other historic sites that have been preserved by the county.
- 4. Entrenched valleys.** In the southern portion of Jefferson County along Cedar Creek, Floyd's Fork, and other tributaries of Salt River, there is yet another aspect of Mississippian adaptation within the numerous rockshelters, such as at the Miles Site.
- 5. Outlying area adjacent to the Falls.** Finally, the relatively undeveloped counties adjacent to the Falls area in southern Indiana and north-central Kentucky offer abundant opportunities for research. This is especially true of sites within the Salt River drainage and along Plumb Creek (15SP1 and 15SP3) in Spencer County. While the shallow plowed-out sites in the bottomlands of Salt River and Beech Creek within the Taylorsville Lake impoundment produced little in the way of intensive occupation during this period (though 54 triangular points were found) there is greater promise in the surrounding upland around Taylorsville Lake. This is evident by as yet unrecorded ceramic bearing sites in the vicinity of Little Mount on Beech Creek. A site recently examined by the author in this area has yielded evidence of deep midden deposits with good faunal preservation. Triangular projectile points are common finds here.

While the research reported here has not conclusively established the association of the many mounds of the Falls of the Ohio floodplain with Mississippian builders, it has hopefully brought to the attention of professional researchers the very real probability that a major Mississippian center, not unlike Angel to the southwest, once existed at what is now Louisville, Kentucky. While much has been lost, remarkably, much remains for future study. Undoubtedly, Mississippian period research has been dealt a near-fatal blow in the Falls region, but it is not quite dead---except, perhaps, to those who, through unquestioned acceptance of speculation as fact, have never seriously considered the potential there.

### ACKNOWLEDGEMENTS

The author acknowledges Ms. Robin Gillespie and Mr. David Schatz for their role in preparing some of the graphics that appear in this article. Mr. Greg Penner drew the artifacts. My thanks to each of these individuals.

### REFERENCES CITED

Anonymous

1922 Finis. *Civic Opinion*. October 28, 1922. Louisville, Kentucky.

1926 Gwalthmey Home, Over Century Old, Crowns Indian Mound on Sixth Street. (1926, May 2). *Herald-Post*.

Bader, A. T.

2001 Prehistoric Earthworks. In *The Louisville Encyclopedia*, edited by John E. Kleber, p. 720. University of Kentucky Press, Lexington, Kentucky.

Bader, A. T., J. E. Granger, T. Sieter, C. M. Rohe

1998 *A Phase I Archaeological Reconnaissance of the Cedar Creek Residential Relocation Project*. Submitted to the Regional Airport Authority, Jefferson County, Kentucky. Joseph E. Granger Ph.D. Consultant, Louisville, Kentucky.

Bader, A. T. and M. J. Stottman

1992 *Phase II Archaeological Investigations on Five Sites in the Right-of-Way of the TRANSCO/Texas Gas/CNG Northeastern Project (Main Line System Expansion) in Jefferson County, Kentucky*. Archaeology Resources Consultant Services, Louisville, Kentucky.

Begley, C.

2000 *Kentucky Archaeology, the Newsletter of the Kentucky Organization of Professional Archaeologists*, Winter 2000:17.

Black, G. A.

1967 *Angel Site*. Indiana Historical Society, Indianapolis.

Bladen, W. A.

1984 *A Geography of Kentucky; A Topical-Regional Overview*. Kendall/Hunt, Dubuque, Iowa.

Borden, W. W.

1874 Report of a Geological Survey of Clark and Floyd Counties. *Indiana Geological Survey Annual Report 5*. Indiana Geological Survey, Indianapolis.

Briney, M.

1926 Louisville's Oldest House Still is a Home! 'The Grayson Home' on Sixth Street was Center of Social Brilliance in Early Part of 19th Century. (1926, May 9). *The Louisville Courier-Journal*.

1955 *Fond Recollection, Sketches of Old Louisville*. The Louisville Times, Louisville, Kentucky.

Brown, I. W.

1981 A Study of Stone Box Graves in Eastern North America. *Tennessee Anthropologist* 6(1):2-26.

Casseday, B.

1852 *The History of Louisville From Its Earliest Settlement to the Year 1852*. Hull and Brother, Louisville, Kentucky.

Chenault, E. W.

1962 *The Development of Louisville, Town and City, From the Earliest Beginnings to 1830*. Unpublished Master's thesis, University of Louisville, Louisville, Kentucky.

Collins, M. B. (Editor)

1979 *Excavations at Four Archaic Sites in the Lower Ohio Valley, Jefferson County, Kentucky*. Volumes I and II. Occasional Papers in Anthropology No. 1. University of Kentucky, Lexington.

Collins, R. H.

1874 *Collins' Historical Sketches of Kentucky. History of Kentucky by Lewis Collins, Revised, Enlarged Four-Fold, and Brought Down to the Year 1874 by His Son*, vol. II. Reprinted by the Kentucky Historical Society, Frankfort.

Cox, E. T.

1874 *The Fifth Annual Report of the Geological Survey, Made During the Year 1873.* Indiana Geological Society, Indianapolis.

Deacon, R.

1966 *Madoc and the Discovery of America, Some New Light on an Old Controversy.* George Braziller, New York.

DiBlasi, P. J. and B. K. Braunbeck

1977 *An Inventory of the Prehistoric Resources of Portions of Bullitt, Henry and Shelby Counties and all of Oldham County as set forth in the Louisville 208 Project.* Submitted to Schimpeler-Corradino Associates, Louisville, Kentucky.

Durrett, R. T.

1893 *The Centenary of Louisville.* Filson Club Publications, No. 8. Filson Club, Louisville, Kentucky.

1896 *The Falls Previous to the White Man's Advent. Chapter IV in Memorial History of Louisville From Its First Settlement to the Year 1896.* Edited by J. S. Johnston, American Biographical, Chicago and New York.

1908 *Traditions of the Earliest Visits of Foreigners to North America.* Filson Club Publications, First Series, No. 23. Filson Club, Louisville, Kentucky.

Eschrich, J. L.

1939 'Good Indian' Discovered on Dairy Farm, Buried With Relics Near Ancient Village. (1939, June 17). *The Louisville Courier-Journal.*

Evans, R. B.

1883 *Mounds in Barren and Allen Counties, Kentucky.* *Annual Report of the Smithsonian Institution of 1881.* U.S. Government Printing Office, Washington D.C.

Ford, H. A. and K. Ford

1882 *History of the Ohio Falls Cities and Their Counties.* (Two Volumes). L. A. Williams, Cleveland.

Funkhouser, W. D. and W. S. Webb

1928 *Ancient Life in Kentucky.* Kentucky Geological Survey, Geological Reports, Series 6, Vol. 34.

Granger, J. E.

n.d. *From Green Street to Galleria: An Early Prehistoric Discovery in the Central Business District of the City of Louisville, Kentucky.* Ms. on file with the author.

Granger, J. E. and A. T. Bader

1991 *Guthrie Beach Archaeology: Archaic and Woodland Settlement Pattern Variability on Floodplain and Upland in Jefferson County, Kentucky.* In *Studies in Kentucky Archaeology*, edited by C. D. Hockensmith, pp. 27-44. Kentucky Heritage Council, Frankfort.

Granger, J. E., B. J. McGraw, and D. E. Janzen

1973 *A Reconnaissance and Evaluation of "Known" Prehistoric Sites in the Falls of the Ohio Region.* Submitted to the Falls of the Ohio Metropolitan Council of Governments, Historic Preservation Committee. University of Louisville Archaeological Survey, Louisville, Kentucky.

Griffin, J. B.

1978 *Late Prehistory of the Ohio Valley.* In *Northeast*, edited by Bruce Trigger, pp. 547-559. Handbook of North American Indians, Vol. 15, William G. Sturtevant, general editor.

Smithsonian Institution, Washington D.C.

Guernsey, E. Y.

- 1939 Relationships Among Various Clark County Sites. *Proceedings of the Indiana Academy of Science* 48:27-32. Indianapolis.
- 1942 The Cultural Sequence of the Ohio Falls Sites. *Proceedings of the Indiana Academy of Science* 51:60-67. Indianapolis.

Hammon, N. O.

- 1978 Early Louisville and the Beargrass Stations. *The Filson Club Historical Quarterly* 52(2):147-165.

Henderson, A. G.

- 1992 Dispelling the Myth: Seventeenth- and Eighteenth-Century Indian Life in Kentucky. *Register of the Kentucky Historical Society* 90:1-25.

Janzen, D. E.

- n.d. *An Archaeological Study of the Falls of the Ohio River Region*. Unpublished Ms. on file, Centre College, Danville, Kentucky.
- 1972 Archaeological Investigations in Louisville and Vicinity: A Historical Sketch. *The Filson Club History Quarterly* 46(4):305-321.
- 1977 The Devil's Backbone of Clark County, Indiana and the Evolution of a Legend. *The Filson Club Quarterly* 51(4):303-314.

Johnston, J. S. (Editor)

- 1896 *Memorial History of Louisville From Its First Settlement to the Year 1896*. American Biographical, Chicago and New York.

Kellar, J. H.

- 1973 *An Introduction to the Prehistory of Indiana*. Indiana Historical Society, Indianapolis.

Kiser, W. H.

- 1935 Neighborhood Sketches. The Grayson Homestead. (1935, May 13). *The Louisville Times*.

Kramer, C.

- 1999 Visionaries, Adventurers, and Builders: Historical Highlights of the Falls of the Ohio. Sunnyside Press, Jeffersonville, Indiana.

Lewis, R. B. (Editor)

- 1990 Mississippi Period. Chapter Six in *The Archaeology of Kentucky: Past Accomplishments and Future Directions, Volume Two*, pp. 375-466. State Historic Preservation Comprehensive Plan Report No. 1, edited by D. Pollack, Kentucky Heritage Council, Frankfort.
- 1996 *Kentucky Archaeology*. The University Press of Kentucky, Lexington.
- 1997 Mississippian Farmers. In *Kentucky Archaeology*, edited by R. B. Lewis, pp. 127-159. The University Press of Kentucky, Lexington.

Lowthert, W., C. Shields, and D. Pollack

- 1998 *Mississippian Adaptations Along the Barren River in South Central Kentucky*. Research Report No. 1. Kentucky Archaeological Survey, Lexington.

Louisville City Directory

- 1835 Louisville and Portland Canal Construction Began in 1826. Reprinted in *The Kentucky Explorer*. January (167):58-59.

Marshall, Dr. H.

1812 *The History of Kentucky*. Henry Gore, Frankfort, Kentucky.

Matthews, J. A.

1958 The Zorn Avenue Village Site, Jefferson County, Kentucky. *Ohio Archaeologist* 8(4):114-126.

McGrain, P. and J. C. Currens

1978 *Topography of Kentucky*. Kentucky Geological Survey, Series X, Special Publication 25, University of Kentucky, Lexington.

McMurtrie, Dr. H.

1819 *Sketches of Louisville and It's Environs*. S. Penn, Jr., Louisville, Kentucky.

Mocas, S. T.

1976 *Excavations at the Arrowhead Farm Site (15JF237)*. University of Louisville Archaeological Survey, Louisville, Kentucky.

Muller, J.

1978 The Kincaid System: Mississippian Settlement in the Environs of a Large Site. In *Mississippian Settlement Patterns*, pp. 269-292. Academic Press, New York.

1986 *Archaeology of the Lower Ohio River Valley*. Academic Press, New York.

Olson, D.

1987 *Prince Madoc: Founder of Clark County, Indiana*. Published by the author, Jeffersonville, Indiana.

O'Malley, N., B. N. Driskell, J. Riesenweber, and R. S. Levy

1980 *Stage I Archaeological Investigations at Fort Knox, Kentucky*. Department of Anthropology, University of Kentucky, Lexington.

Pollack, D., A. G. Henderson, and C. T. Begley

2002 Fort Ancient/Mississippian Interaction on the Northeastern Periphery. *Southeastern Archaeology* 21(2):206-220.

Poynter, C.

2002 Indian artifacts found at lock-construction site. (2002, October 11). *The Courier-Journal*, p. B2.

2003 Artifacts shed light on history of two Louisville-area tribes. (2003, June 24). *The Courier-Journal*, p. A-1-3.

Pulitzer, M.

1958 Story of Indian Slaughter in 1660's Here Gets Boost. (1958, September 27). *The Courier-Journal*, Section 2.

Rafinesque, C. S.

1824 *Ancient History or Annals of Kentucky: Introduction to the History and Antiquities of the State of Kentucky*. Frankfort, Kentucky.

Railey, J. A.

1992 Chipped Stone Artifacts. In *Fort Ancient Cultural Dynamics in the Middle Ohio Valley*, edited by A. G. Henderson, pp. 137-168. Monographs in World Archaeology No. 8. Prehistory Press, Madison, Wisconsin.

Ray, L. L.

1974 *Geomorphology and Quaternary Geology of the Glaciated Ohio Valley: A Reconnaissance Study*. U.S. Geological Survey Professional Paper 826. Washington D.C.

Riebel, R. C.

1954 *Louisville Panorama, A Visual History of Louisville*. Liberty National Bank and Trust Company of Louisville, Louisville, Kentucky.

Sanders, S. R.

1991 *The Force of Moving Water*. In *Always a River*, edited by R. L. Reid. Indiana University Press, Bloomington.

Seeman, M. F.

1973 *The Prehistoric Chert Quarries and Workshops of Harrison County, Indiana*. Indiana Archaeological Bulletin 1(3):47-61.

Seiber, E. and A. I. Ottesen, Editors.

1989 *Final Report on the Phase III Mitigation of the Clark Maritime Archaeological District, Clark County, Indiana*. Submitted by Resource Analysts, Inc. Bloomington.

Sharp, W. E.

1990 *Fort Ancient Period*. Chapter Seven in *The Archaeology of Kentucky: Past Accomplishments and Future Directions, Volume Two*, pp. 467-558. State Historic Preservation Comprehensive Plan Report No. 1, edited by D. Pollack, Kentucky Heritage Council, Frankfort.

1996 *Fort Ancient Farmers*. In *Kentucky Archaeology*, edited by R. B. Lewis. The University Press of Kentucky, Lexington.

Simmons, I.

1977 *The Legend of Sand Island*. (1979, July 21). *The Louisville Times*, Sec. Scene.

Sinclair, W. and H. Browning

1965 *Once Sleepy Jeffersontown is Growing Up: Ours Suburbs...Then and Now*. (1965, November 6). *The Louisville Times*.

Spetz, D. L.

2001 *Geography*. In *The Louisville Encyclopedia*, edited by John E. Kleber, page 334. University of Kentucky Press, Lexington.

Stewart, K.

1988 *Grand houses, farms lose out to parkway: showcases of the past on Six Mile Lane are in Husrbourne's path*. (1989, August 16). *The Courier-Journal*, Sec. Neighborhoods.

Taylor, S.

1933 *Old Louisville Ponds*. (1933, April 6). *The Courier-Journal*.

Webb, W. S. and W. D. Funkhouser

1932 *Archaeological Survey of Kentucky. Reports in Archaeology and Anthropology, Volume II*. Department of Anthropology and Archaeology, University of Kentucky, Lexington.

Willey, G. R. and J. A. Sabloff

1973 *A History of American Archaeology*. W. H. Freeman, San Francisco.

Young, Colonel B. H.

1910 *The Prehistoric Men of Kentucky*. John P. Morton, Louisville, Kentucky.

Zimmerman, W. H.

1966 *Soil Survey Jefferson County Kentucky*. United States Department of Agriculture, Soil Conservation Service, Washington D.C.

# PRIVY EXCAVATION AT THE NINETEENTH CENTURY LABORATORY OF A LOUISVILLE DRUGGIST

By

*ANNE TOBBE BADER, PRESIDENT*

*FALLS OF THE OHIO ARCHAEOLOGICAL SOCIETY*

*CLARKSVILLE, INDIANA*

## INTRODUCTION

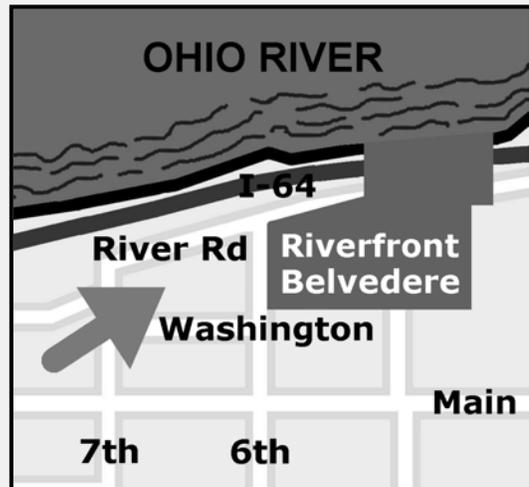
In October and November of 2002, AMEC Earth & Environmental, Inc. was under contract by Parking Authority of River City (PARC) to provide construction observation and quality control/quality assurance testing for the excavation efforts at the Muhammad Ali Center and Parking Garage in downtown Louisville. The ongoing construction site is located between Sixth and Seventh Streets, and Washington Street and River Road. The excavation exposed historic features such as privies, wells, cisterns, and brick structural foundations. The features appear to have been associated with residences and small, home-operated businesses along what was then known as Water and Sixth Streets as early as 1832. On November 7 and 8, 2002, AMEC's archaeologists were called onto the site to investigate. Excavation of the site had progressed significantly by the time AMEC began archaeological investigations of the site. As a result, archaeological remains at only one site, 15JF697, was excavated and documented. To offset the loss of other features, several of which will remain intact buried below the new facility, a contextual study of the city block was prepared.

The entire block between Washington Street and River Road, and Sixth and Seventh Streets, was to be excavated to a level depth of 428 feet (131 m) AMSL. Since the site was sloped towards the Ohio River, this required the excavation of 20-25 feet (6-8 m) of existing fill dirt. This fill dirt served to protect the historic cultural features through years of development on the site. However, as the excavation continued towards the 428-ft elevation, it extended into previously undisturbed ground, exposing features.

The field investigations began with monitoring the ongoing excavation. When artifact concentrations or structural remains and features were intersected, the heavy equipment operators withdrew from that area. The area was cleared by hand, using both shovel and trowel, to isolate and identify the feature. Once the find was determined to be a feature and not a disturbed artifact scatter, the feature was assigned a number and mapped. Measurements were taken to tie the feature location into the construction maps.

Although scattered remains from what could be described as several archeological sites were discovered during this project, only one area contained intact cultural deposits that could be accessed and accurately documented. This feature, a privy pit, was identified and totally excavated.

The feature was found within an area occupied by the J. M. Robinson-Norton Co. Wholesalers Warehouse as shown on the 1905 Sanborn insurance map. This property was documented in the archives as being formerly associated with the R.A. Robinson & Company/Robinson-Petett Importers and Wholesale Druggists. Although only the privy was found to be intact, the entire city lot formerly associated with this enterprise was designated as the archaeological site, and assigned a number of 15JF697.



## DISCUSSION

### Privy Description

At approximately 150 cm (4.92 ft) above the 428-ft (130.5 m) excavation target, the top of the brick-lined privy was encountered (**Figure 1**). The privy had been partially impacted, and thereby exposed, by the backhoe. The privy measured 136 cm (4.4 ft) in diameter from the exterior of the bricks. It was constructed of a dry-laid, single course of brick laid in the American or Stretcher Bond pattern. Excavation below the 428-ft (130.5 m) elevation was required to reach the lower levels of the feature. The privy was found to be nearly 200 cm (6.5 ft) tall. A single sheet of wood lined the bottom of the pit. The width of the privy decreased only slightly with depth; at the base, it measured 130 cm (4.26 ft).

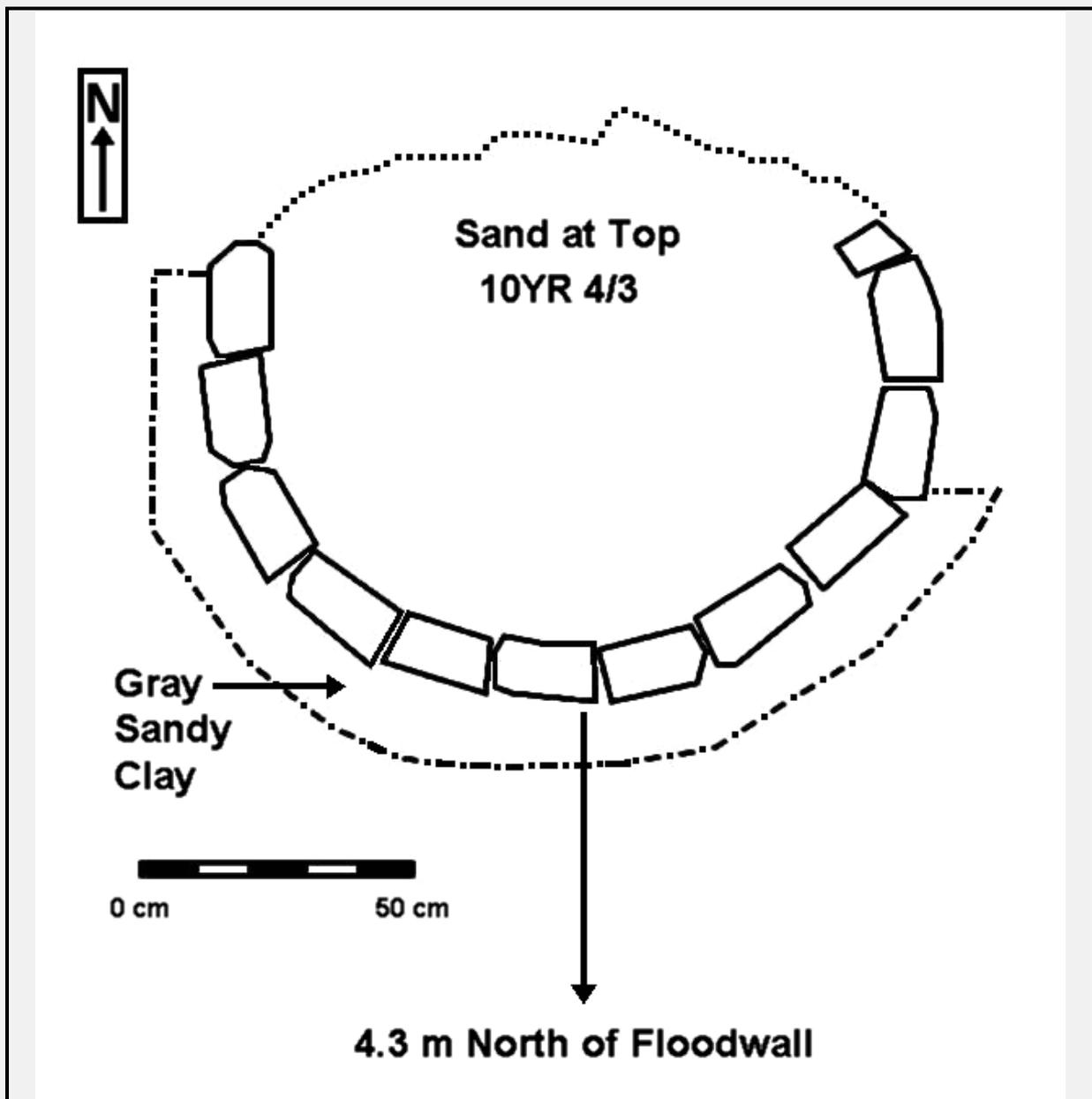
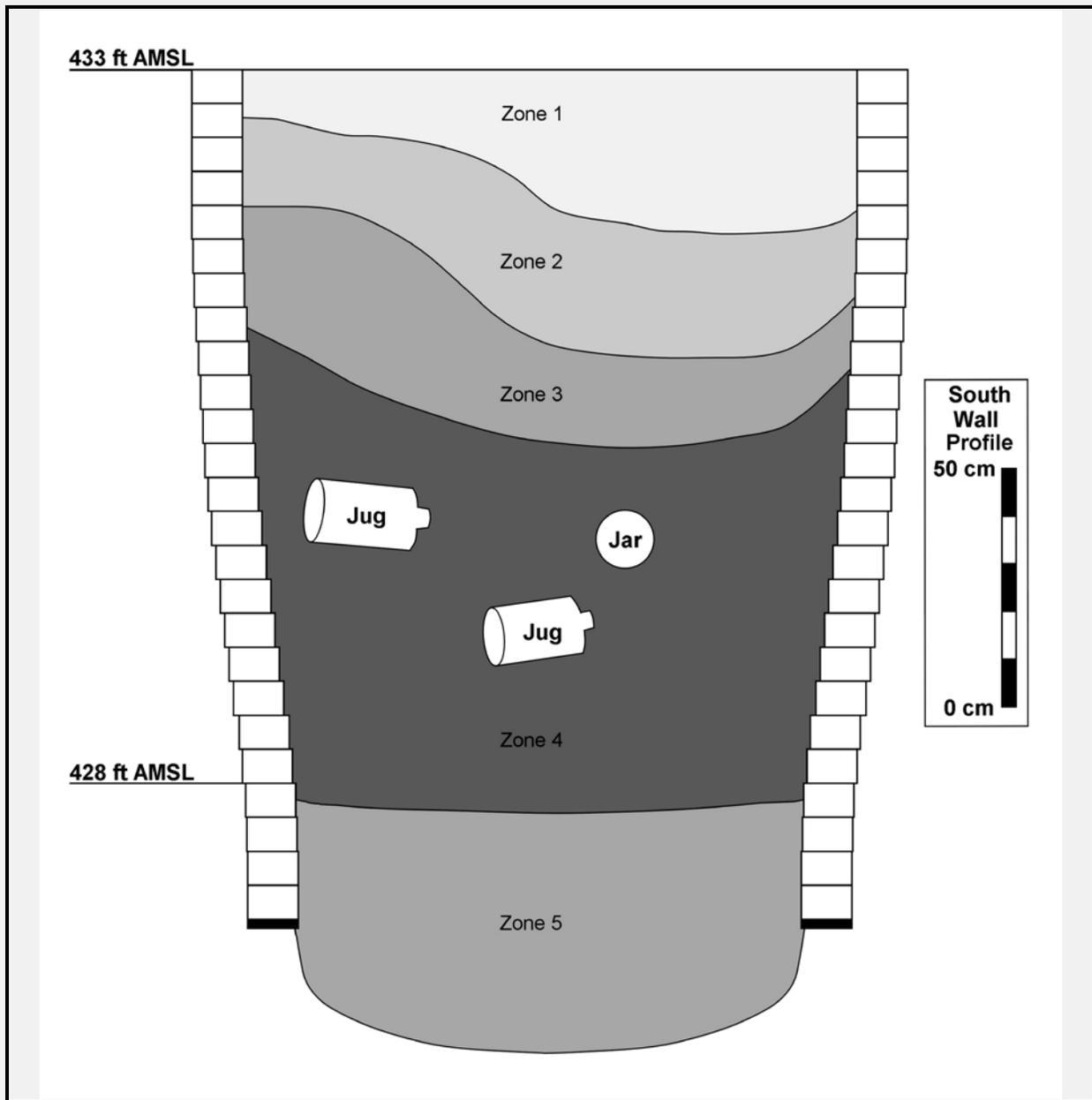


FIGURE 1. FLOOR PLAN OF PRIVY AT SITE 15JF697.



**FIGURE 2. PRIVY PROFILE.**

### **Privy Stratigraphy**

Five distinct zones were noted in the privy fill (**Figure 2**). Zone 1 was a dense, mottled mix of clay and other soils with a low artifact count. The base of this level was deeper on the western side of the privy at approximately 34 cm (13 inches) below surface (bs), as opposed to 10 cm (4 inches) bs on the eastern side. The artifacts from this level appeared to be largely domestic in nature suggesting that the soil was fill deposited from an area that had both a domestic occupation and developed subsoils. The artifacts were very fragmented and small. This zone is perhaps best interpreted as a mixed-provenience dumping episode to cap the privy after its abandonment.

Zone 2 was a dense clay lens of light colored yellowish brown clay (Munsell 10YR 5/4- 5/6). As with Zone 1, the strata sloped to the west, with the privy fill of this layer being deeper than the eastern. The base of this zone was at approximately 60 cm (24 inches) bs on the west side and 28 cm (11

inches) bs on the east. No artifacts were found in this layer. This soil was likely introduced to fill the privy after abandonment.

Zone 3 was a mix of banded and mottled clays and other soils. The clays were either light yellowish-brown (Munsell 10YR 5/4-5/6) in color or somewhat more grayish. The other soils within the mixed zone were darker, loamy soils, approaching dark brown (Munsell 10YR 4/3). The lowest depth of this zone was approximately 79 cm (31 inches) bs at the deepest point. The base of this zone had a more rounded, bowl-shaped profile than either Zones 1 or 2. This level contained no artifacts that were retained. They consisted solely of amorphous, unidentifiable rusted fragments of metal and lumber fragments, both painted and unpainted; possibly indicating demolition or construction debris.

Zone 4 consisted of a dark brown to very dark grayish-brown (Munsell 10YR 3/2 –10YR 2/2) loamy soil banded by a lens of mottled clay and sand. The majority of the artifacts recovered from the privy originated from this level. The base of this zone was bowl shaped and was located at approximately 1.5 m (4.9 feet) bs. Large numbers of intact artifacts were recovered from this zone including glass bottles, ceramic jugs and jars, and other pharmaceutical related items.

Zone 5 consisted of four layers of bedded sands and gravels. The top layer of this zone was clay lens that appeared to cap the layers below. This layer contained few artifacts. The second layer consisted of fine sand, and contained a fair number of artifacts. The third layer consisted of sandy gravel mixed with a large number of intact glass artifacts, especially embossed bottles. The base of this zone was a mixed gravel and loam mix that had a bowl shape to the profile. The final depth of this layer and the privy was approximately 2.0 m (6.6 feet) bs. The soils were somewhat lighter in this mixed zone, approximating yellowish-brown (Munsell 10YR 4/3).

### Artifacts Recovered

A total of 416 artifacts were recovered from the privy at 15JF697. These included no domestic articles, and only two that could be considered items of personal belongings. The latter include an elaborately carved bone toothbrush, and a two-piece, metal tobacco pipe. Two 4-hole porcelain buttons and some poorly preserved fabric were also recovered.

The majority of the artifacts, however, include glass bottles, both embossed and plain. In particular, a variety of bottles embossed with the *R.A. Robinson & Co.* were found, both in cobalt and clear glass. **Figure 3** depicts one type. Bottles that contained other locally-made products were also recovered, such as one labeled *P.F.C Biehl Pharmacist, Louisville, KY*. Medicine bottles from other, east coast drug manufacturers included *Simmon's Liver Regulator*. Bottles of unmarked origin are *Dr. McMunn's Elixir of Opium* and *Trommers Extract*.

A variety of all sizes of round and square bottles with unspecified contents, some marked on the base with KY GW (Kentucky Glass Works) logo, were recovered, along with numerous small vials. The bottles were "blanks," used to dispense locally made medicinal preparations. A number of ground-stemmed, glass stoppers used to cap these bottles were found in the privy contents. The small vials likely contained extracts used in the manufacture of extracts, syrups, and elixirs. Several wine bottles were also found.

Other artifact types include a large stone mortar, stoneware jugs, and small whiteware jars that contained pureed beef for consumption by convalescent patients, who could not eat a regular diet. Two large calibrated measuring glasses exhibited tapered bodies on a pedestal base, etched with numbers and lines.

Zone 1 is the only stratum that contained domestic or kitchen-related items. Broken ceramics, broken glass, and rusted metal were recovered. These were highly fragmented and most likely collected from soil of an unknown source, but probably from the nearby area. The soil was used to

fill and cap the privy following abandonment. As such, any analysis of these artifacts is relatively meaningless. Aside from a broken cobalt Robinson pharmacy bottle, the artifacts appear related to a residence unrelated to the Robinson occupation of the site.



**FIGURE 3. R. A. ROBINSON  
AND CO. COBALT BOTTLE**

Zone 4 artifacts can best be described as those directly associated with the manufacture of pharmaceutical preparations. The large stoneware jugs, small whiteware storage jars, bottles, glass stoppers, measuring glasses, and mortar indicate the processing and bottling of medicinal products.

This is the largest and most artifact dense zone of the privy, which was likely in active use during this fill episode. Collectively, the artifacts represent a remarkably uniform assemblage in terms of function and age.

Zone 5 produced the majority of embossed bottles. A trend towards using/distributing commercially prepared products is emphasized as opposed to the manufacture of such products. This is consistent with the data in the archives. This zone yielded the only two personal artifacts recovered during this project, and represents the earliest use of the privy. Some of the artifacts recovered appear to be related to mass dumping of embossed bottles that were no longer considered useful.

The nature of the artifacts recovered from this site, in conjunction with research of the archives, leaves no doubt the privy pit excavated during this project was associated with the R.A. Robinson Co.-Robinson-Pettet druggist company.

### **Robinson Druggist History**

An article in the *Memorial History of Louisville from its First Settlement to the Year 1896* (Johnston 1896) was written by C. Lewis Diehl, an important figure in the history of Louisville's pharmaceutical industry. In this article, Diehl provides a very satisfactory account of the Robinson-Pettet operation over time. It had its roots in 1828, when William F. Pettet operated a drugstore or "stand" on Market and Fourth Street. Pettet's enterprise represented the third or fourth druggist company in the city. In 1834, Arthur Peter came to Louisville from Pittsburgh to work for Pettet. There, Peter became associated with Richard A. Robinson.

Another early druggist, George H. Cary, had entered into association in 1836 with a Mr. Yenowine and succeeded to the business of one Doctor F. Schorch on Main Street, naming their business Cary & Yenowine. Cary later joined Peter and Robinson for a time as Robinson, Peter, & Cary. Eventually, in 1844 (1842, according to other information), Cary resigned from the firm, and Robinson & Peter opened as a wholesale drug house on Main Street (also known as Peter & Robinson). Cary continued to do a good business at Pettet's old stand on Market Street.

An 1850 advertisement shows a firm by the name of Bell, Robinson & Co. on the south side of Main Street between Third and Fourth Streets, suggesting another short-lived partnership of Robinson. Between 1851 and 1858, according to city directories and advertisements, the firm became known as R. A. Robinson & Co. In 1865, R.A. Robinson & Co. was located between Fifth and Sixth Street.

The woodcut pictured on their sales receipts and on the cover of the *R.A. Robinson Formulary and Dose Book* depicts the store at 194 Main Street.

By 1880, Charles Pettet, a son of William, became a partner with Robinson, and the name again changed to the Robinson-Pettet Company. The store was then advertised as the "largest drug house in the West and the South" (R.A. Robinson Formulary and Dose Book 1979). By 1896, it is said to have been one of the foremost drug houses of the "far West." By 1913, they were located at 609-611 West Main. The company continued as Robinson-Pettet until it closed its doors in 1933. From 1842-1933, the company was always located on Main Street.

A small book, prepared in 1879 by R.A. Robinson & Company, was found on file at the Filson Club in Louisville (**Figure 4**). This book was written in response to requests from Robinson's customers, primarily physicians and apothecaries, regarding the formulas used in the preparation of their medicinal products. This volume, over 130 pages in length, presents formulas for fluid extracts, syrups, elixirs, and wines. It also provides the appropriate doses for each remedy, and discusses the ailment(s) for which they were appropriate treatment. It provides information on poisons and antidotes, as well as articles of diet for the sick and convalescent. It also provides valuable information on the storage and preservation of drugs.

Aside from these topics, the book contains a good deal of information on the establishment and operation of the pharmacy. In a prefatory article written in 1877, it states that "Messrs. R. A. Robinson & Co., wholesale druggists of this city, have within the past few months engaged in the manufacture of fluid extracts and other pharmaceutical preparations". This indicates that before 1877, the operation was restricted solely to the import and wholesale aspect of the business.

The book also describes the physical plant as follows:

Their laboratory is a very extensive one. The manufacturing department of Messrs. Robinson & Company is still continued at No. 28 Sixth Street, in a building recently erected for this purpose. The very best modern appliances to be had are in use in this laboratory. An eight-horse power engine is employed to run a large drug-mill and other machinery. There are fine steam apparatuses for distilling and evaporating at low temperatures, thus avoiding the injurious effect of extreme heat in making certain preparations. The store and laboratory are connected by a new improved telephone, which proves a great convenience as it is a great saving of time and labor.

The history of the Robinson druggists obtained from archival research, allows a reliable dating of the privy at site 15JF697. Although the Robinson druggist company (under various names) was in business since 1842, it operated solely as an importer and wholesale distributor of drugs and preparations until 1877. At that time, the *Robinson Formulary and Dose Book* states the manufacturing department of the company was established in a building recently erected at 28 Sixth Street, later identified as 140-141 Sixth Street in city directories, for this new purpose. The abundance of bottle “blanks” in Zone 4 of the privy support the suggestion Robinson was preparing and dispensing his own concoctions.

The company's occupation of the site does not appear on any mapping until 1892 however, leading one to speculate that perhaps they may have leased the property initially, possibly from Bridgeford Stove Company who had owned the lot for many years. However, the city directories indicate the Robinson enterprise was present on the site around 1880, even though it is not depicted on mapping. The presence of pre-1870 bottles and glass jars, manufactured before automatic or even semi-automatic machine technologies, attest to the pre-twentieth century filling of the privy. Other embossed bottles recovered provide additional support.

Perhaps the most telling evidence is derived from the Robinson bottles themselves. These are labeled with “R.A. Robinson & Co.” The company operated under this name as a wholesale importer and distributor of preparations from approximately 1858 through at least 1880 at which time the name was changed to Robinson-Pettet. The disposal of R.A. Robinson & Co. embossed bottles may well reflect this name change. No bottles marked with Robinson-Pettet are indicated in the literature, and none were found in the privy. Under this scenario, Zone 5 of the privy would have been filled from 1877 (when the laboratory for drug manufacture was established at 28 Sixth Street) to approximately 1880. As stated above, Zone 4 contains artifacts dedicated to the manufacture of drugs and preparations. These artifacts, however, while unmarked with diagnostic data, lack evidence of machine manufacture. No other indicators of early twentieth century were found in the privy, suggesting Zone 4 was filled prior to the turn of the century. The emplacement and connection of sewers in the area likely occurred early in the twentieth century. The property remained in the name of Robinson until 1932 at which time the lot is reported as vacant.

## **CONCLUSIONS AND RECOMMENDATIONS**

Site 15JF697 is now completely destroyed. However, it is significant in the sense that it represents one of the very few sites related to the Louisville and regional druggist industry. The site is associated with a mid-late nineteenth century operation that extended into the 1930s, a period of over 91 years in the same family ownership and operation. In addition, the company has ties to one of the earliest of Louisville's druggists, that of William Pettet who began his operation in Louisville in 1828.

This project and the report of findings has only touched upon the analytical value of the artifacts and archive data that could be gathered relating to the nineteenth century pharmaceutical industry in

Louisville. Hopefully, the collection, to be housed by the City of Louisville, will remain available for future scholarly research. Further opportunities for public education could be provided by the preparation of an interpretive display of the collection.

PHYSICIANS AND PHARMACISTS'  
FORMULARY  
AND  
DOSE BOOK.

CONTAINING THE DOSES OF DRUGS IN GENERAL USE MEDICINALLY; ALSO THE FORMULÉ FOR PREPARING WINES, TINCTURES, SYRUPS, ETC., FROM THE  
FLUID EXTRACTS

AGENTS FOR  
GEO. TIEMANN & CO.'S  
SURGICAL INSTRUMENTS.



GENERAL AGENTS FOR  
SCHEFFER'S PEPSIN  
FOR THE UNITED STATES.

MANUFACTURED BY

**R. A. ROBINSON & CO.**  
Nos. 194 AND 196 MAIN STREET.  
LABORATORY, - 28 SIXTH ST.,  
LOUISVILLE. KY.

FIGURE 4. COVER OF ROBINSON FORMULARY AND DOSE BOOK.