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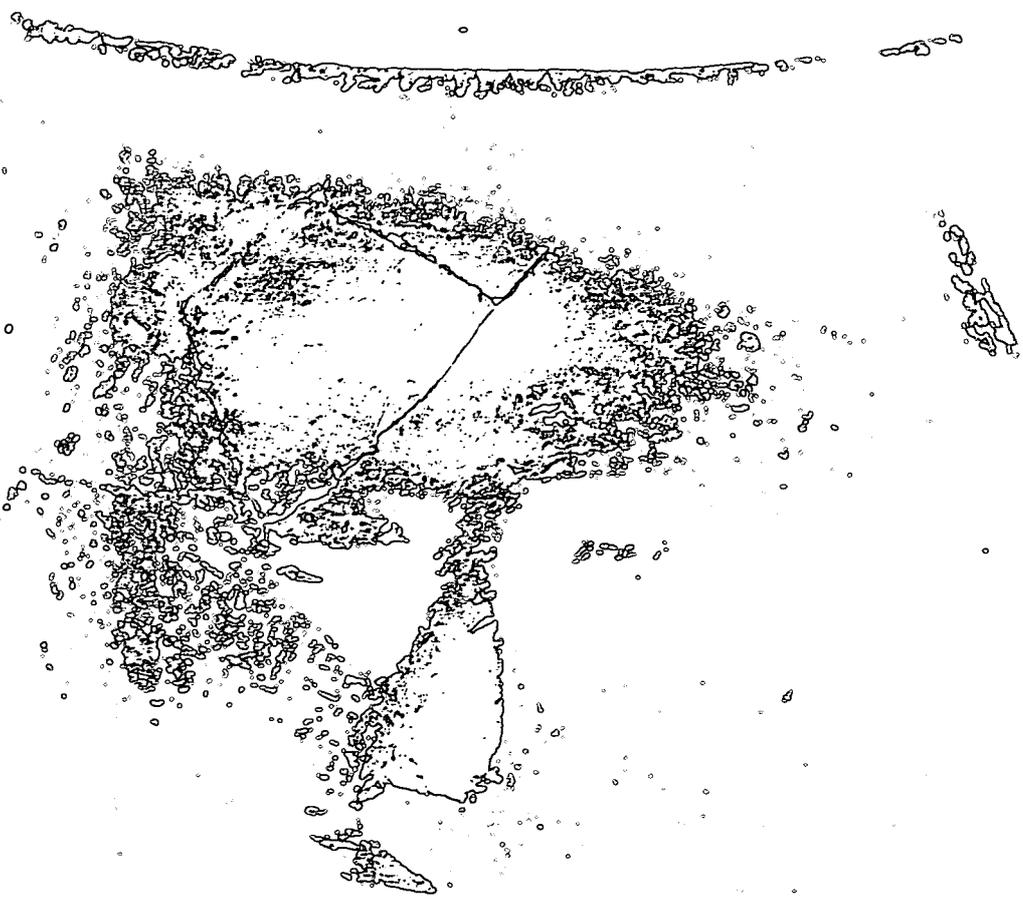
**COWAN, C. W., FIRST FARMERS OF THE MIDDLE OHIO VALLEY,
CINCINNATI MUSEUM OF NATURAL HISTORY, CINCINNATI, OH -
(USED AS A REFERENCE IN OU5 RI REPORT)**

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**CINCY MUSEUM
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REPORT**

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FIRST FARMERS OF THE MIDDLE OHIO VALLEY



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FIRST FARMERS OF THE MIDDLE OHIO VALLEY:

FORT ANCIENT SOCIETIES, A.D. 1000-1670

text by

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The Cincinnati Museum of Natural History

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Corson Hirschfeld, whose artifact illustrations grace the pages of this booklet, deserves special recognition. His deep appreciation of the subject matter is reflected in these photographs.

Likewise, the contributions of Stan Grimes also deserve note. As Art Director, the layout and overall "look" of the booklet are a tribute to his exceptional abilities.

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DeVere Burt, the Director of the Cincinnati Museum of Natural History, has allowed me the freedom to pursue my interests in the Fort Ancient peoples. His encouragement and support are deeply valued.

Finally, to my wife, Shelley, thanks for sharing the highs and lows.

FOREWORD

Last summer I made the trip from the Museum here in Eden Park to a low bluff overlooking the Great Miami River near Ross, Ohio. The trip had been prompted by the Museum's Curator of Archaeology, Dr. C. Wesley Cowan. Wes was clearly excited about what was happening at an excavation on the river bluff. So it was with eager anticipation that I joined Wes and a small contingent of field assistants and volunteers under cloudless skies at the Schomaker site.

I wasn't prepared for the roughness of the scene. Various tools and excavation plots were scattered across a cleanly plowed field. The only shelter from the intense summer sun and steady west wind was a tarp hung between poles, which provided little relief from the heat. But still there was something special about the site. Here, on this ancient terrace above the Great Miami River, Cowan and company were literally digging into the past, hot on the trail of a vanished society of pre-Columbian Indians referred to as the Fort Ancient culture.

As I explored the site, Wes was called away by a volunteer, so I made the walk across the terrace to the edge of the river. Across the stream a great blue heron fished the shallows surrounding a gravel bar. A belted kingfisher gave its "rattling" call as it flew past me and disappeared into heat waves downstream. I imagined an ancient kingfisher making the same flight on a summer day in A.D. 1350. From my vantage on the terrace I watch the ancient kingfisher land in a low branch of a great sycamore whose canopy reaches out over the water. Below the tree there is splashing in the shallows and the unmistakable music of children's laughter. Small human figures emerge from the cool shadows of the sycamore, the river's water glistening on their smooth brown skin. They clamber up the bluff face chattering incessantly and walk past my position toward a stockade that encircles their village. I am enchanted by the scene, which quickly disappears like a cloud of smoke as Wes returns to my side. Suddenly, I understand his relentless search for clues about these prehistoric Ohioans.

Who were these people who practiced a deadly form of agrarian roulette with their subsistence agriculture? Where did they go? The saga of the Fort Ancient societies comprises a wonderful mystery, begging to be solved.

This booklet, written by archaeologist Wes Cowan, summarizes current knowledge about the Fort Ancient culture in the Tri-state and contains information gleaned over the past 100 years from excavations like the Schomaker site. It's an informative treatise, written with enthusiasm that I am sure will be contagious.

DeVere Burt
Director
The Cincinnati Museum of Natural History

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THE FIRST FARMERS OF THE MIDDLE OHIO VALLEY



Figure 1

When John Cleves Symmes and his group of pioneers landed near the mouth of the Little Miami River in December of 1788, they opened a new chapter in the history of the Ohio Valley. Within a few months other settlers joined them to begin a new life in the wilderness. Though they knew they were not the first to occupy the land between the Miami rivers — the Shawnee Indians claimed this as their ancestral home — the European immigrants could hardly have imagined that only a few hundred years earlier the fertile valleys had been the scene of an active and vital cultural tradition.

Between A.D. 1000-1670, the Fort Ancient peoples, as archaeologists call these Native Americans, farmed the broad, well-drained terraces of the river valleys. They were the first true agriculturalists in the middle Ohio Valley. The surplus corn they raised allowed them to live in large, stockaded towns of several hundred people. Many were carefully planned communities with residential and public spaces. Small by today's standards, the Fort Ancient villages were bigger by far than many of the early European settlements. In fact, their towns were the first permanent settlements in the middle Ohio Valley. The Fort Ancient peoples flourished in the Tri-state area of southwestern Ohio, northern Kentucky and southeastern Indiana for a little over 600 years before abandoning the region shortly before European settlement. Who these societies were and why they disappeared is the subject of this booklet.

The Fort Ancient peoples were the last of the prehistoric Native Americans who occupied the Ohio Valley for more than 14,000 years before the coming of the first European. They have been a subject of interest to archaeologists since the latter part of the last century. In the last hundred years much has been learned about these early societies; much, however, remains to be discovered. This booklet shares information that archaeologists have gleaned from the abandoned villages and camps of the Fort Ancient peoples. It is not intended to be a scientific treatise. It is written for the interested layperson, although at least portions of what follows will be of interest to professional archaeologists as well. For those interested in further reading, important source material for each section is included at the end of the booklet.

Figure 1

Dr. Charles Louis Metz (1847-1926)

Metz papers

Cincinnati Historical Society

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THE HISTORY OF FORT ANCIENT RESEARCH IN THE TRI-STATE AREA

In March of 1878, Dr. Charles L. Metz, a Madisonville physician and avocational archaeologist (Figure 1), began an excavation in Phoebe Ferris's woods of what is now Mariemont, Ohio. Metz had learned of the spot from locals who referred to a neighboring lot as the "pottery field." Within a few days his efforts were rewarded with the discovery of several human burials, some of which were accompanied by pottery vessels. Excavations were continued later that spring under the auspices of the Literary and Scientific Society of Madisonville, Ohio, an early learned society in the Cincinnati area. Metz was appointed superintendent of the excavations, and each Society member paid a monthly fee of fifty cents to help defray the excavation costs. The Literary and Scientific Society also received an early appropriation of \$100 from the Cincinnati Society of Natural History (the forerunner of the Museum of Natural History) in exchange for a portion of the artifacts recovered. Several articles concerning the excavations were published in the Society of Natural History's *Journal*.

Published accounts of the Society's work soon reached the East Coast, and were brought to the attention of Dr. Frederic Ward Putnam, the Director of Harvard University's Peabody Museum of Archaeology and Ethnology (Figure 2). As early as December of 1879, Putnam had opened lines of communication with the Society; a year and a half later he visited the excavations at what had now come to be called the Madisonville site. Thus began a long and fruitful relationship between Metz and Putnam.

Putnam was apparently impressed with both the quantity and quality of prehistoric materials Metz and his colleagues were excavating, and by 1881 had made arrangements with the Society to partially fund their work. In exchange, the Peabody would receive a share of all materials excavated. In the summer of 1882, Putnam himself conducted limited excavations. From this point onward Harvard funded all excavations at the site, and all newly excavated materials became property of the Peabody Museum. Work continued at the site sporadically for the next two decades (Figure 3). During much of this time, Metz was director of the excavations, but was assisted by Harvard students. With their help, excavations also took place on the Turpin, Hahn, Sand Ridge, and Turner sites.



Figure 2

Figure 2

Dr. Frederic Ward Putnam (1839-1915)

Metz papers

Cincinnati Historical Society



When Harvard's excavations were discontinued in southern Ohio at the close of the first decade of the twentieth century, the results were truly staggering. Hundreds of human burials and trash-filled storage pits were excavated at the Madisonville site alone, resulting in the recovery of thousands of artifacts (Figure 4). Metz and Putnam did not give a name to the Indians who occupied the Madisonville site. Although metal objects of obvious European manufacture were occasionally found with burials and in pits, surprisingly, no attempt was made to tie the Madisonville residents to any historically known tribe. Not until 1920, when a report on the excavations was issued, was the suggestion made that the site may have been occupied by the Miami or Shawnee Indians. From where, then, did the name "Fort Ancient Indians" come?

A large prehistoric village is located on the floodplain of the Little Miami River just below the present Fort Ancient State Memorial in Warren County, Ohio. Because of the spatial proximity of the village to the earthworks, it was believed the people who lived in the village built the earthworks. As we shall see, this assumption was later proven to be false.

In the early twentieth century professional archaeology grew in the State of Ohio under the leadership of the Ohio Archaeological and Historical Society. By 1909 the Society's chief archaeologist, W.C. Mills, recognized that the archaeological remains found at the Madisonville and Warren County villages were similar to those he had excavated from the Scioto Valley. He proposed the name "Fort Ancient" culture to account for the peoples who occupied these and other Ohio sites. Mills, like other archaeologists, was convinced that the village below the "Fort" was somehow related to the earthworks. We know today, however, that an earlier culture — one of the Hopewell peoples — built the earthworks on the plateau hundreds of years before the village was inhabited. The name Fort Ancient has remained, however, to refer to the last prehistoric occupants of the middle Ohio Valley.

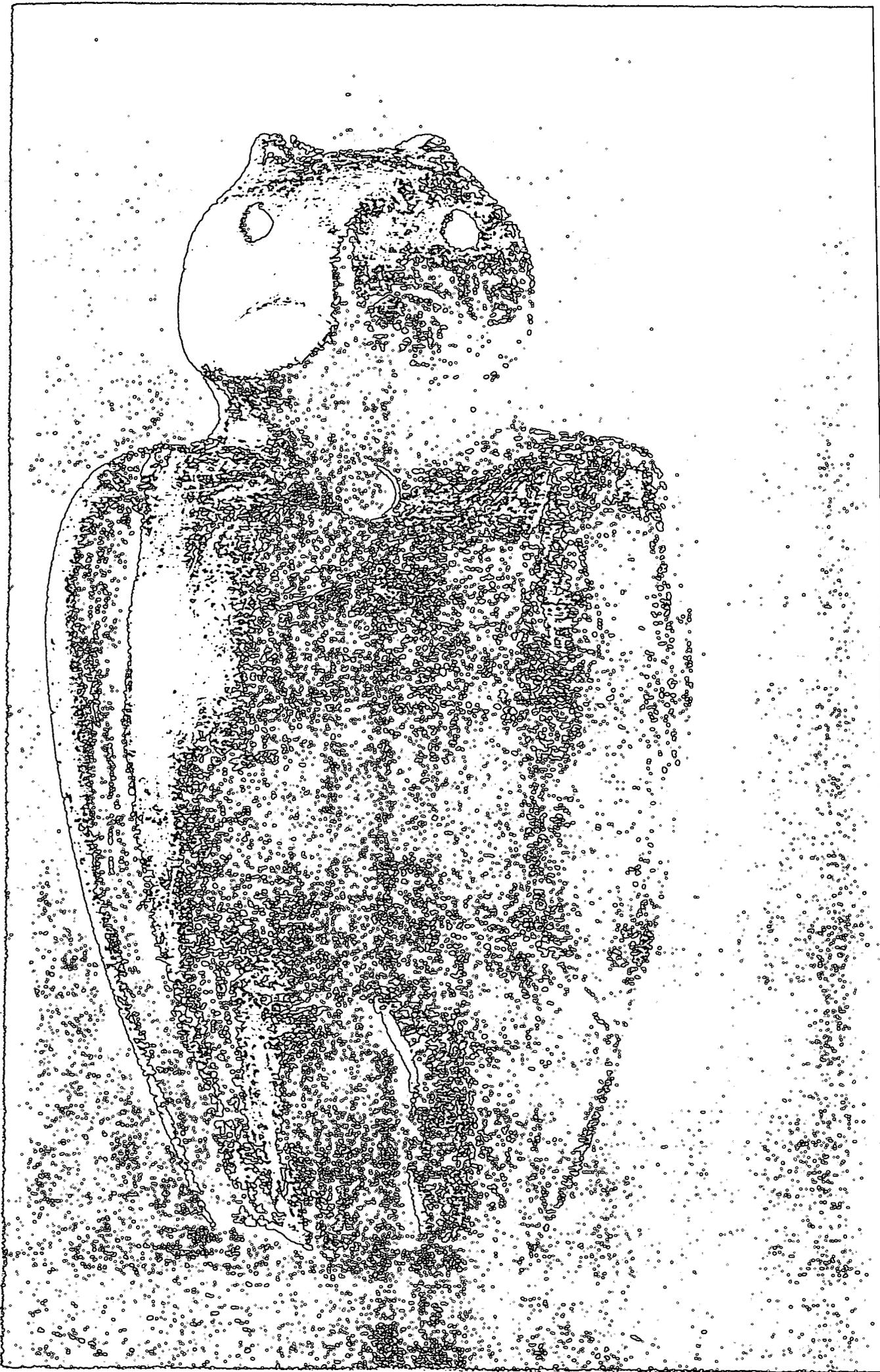
The Cincinnati Museum of Natural History has had a long interest in the archaeology of the Fort Ancient peoples. In addition to providing early support of the excavations of the Literary and Scientific Society of Madisonville, in this century the Museum has sponsored excavations at the Turpin (1945-1949, 1969, 1981), Sand Ridge (1974-75), Stateline (1975, 1979) and Clough Creek (1975-76) sites in Ohio. More recently, survey and excavation work has been conducted at a number of sites in the Great Miami Valley in both Ohio and Indiana. These include the Campbell Island (1985), Hine (1985), Schomaker (1985, 1986) and Guard (1986) sites. The information provided by these early and more recent excavations forms the basis of this booklet.

Figure 3

*In the Ferris Woods — the Madisonville site,
Hamilton County, Ohio 1897*

Metz papers

Cincinnati Historical Society



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ORDERING THE PAST

The Museum of Natural History's most recent excavations have been geared toward collecting information that was largely unavailable to archaeologists until about 35 years ago. One of the main problems encountered by the early archaeologists who were interested in the Fort Ancient peoples was chronological in nature. Without exact means to measure the age of the remains they were excavating, scholars like Metz and Putnam had no real idea of how old the remains of the people at Madisonville were. With the advent of radiocarbon dating in 1950, it became possible to precisely date ancient organic remains. What resulted was no less than a revolution.

In brief, here's how radiocarbon dating works. The Earth's upper atmosphere is constantly bombarded with solar radiation from outer space. A by-product of this bombardment is the radioactive isotope carbon¹⁴. Carbon¹⁴ is distributed evenly throughout the earth's atmosphere, entering the chemistry of living plants by photosynthesis. When plants are eaten by animals (including humans), carbon¹⁴ becomes part of their bone chemistry. When the plant or animal dies, it no longer takes up carbon¹⁴. And since the carbon¹⁴ isotope decays at a known rate, it is possible to measure the amount of radioactive carbon¹⁴ in once living things to determine their precise age.

Through the application of radiocarbon dating, it has been discovered that Fort Ancient peoples occupied the Tri-state region for over 650 years. This is a long period of time. Think of this interval in terms of human generations, with each generation lasting about 25 years. Over 25 generations of Fort Ancient peoples were born, lived out their lives, and died during this block of time. Obviously, many things can happen over so long a period. Within the living memory of many members of our present society, for example, our country has been involved in four wars; the automobile has replaced the horse and buggy; the telephone, radio, and television have been invented and have come to dominate everyday life; and, within the space of a decade, high-speed computers have revolutionized both home and business life. Though changes as revolutionary as these did not take place during the era of the Fort Ancient peoples, the example should nonetheless point out the importance of a cultural chronology.

Chronology is simply the means by which time is divided into smaller blocks or units. Radiocarbon dating is one of the main techniques archaeologists employ to construct cultural chronologies, because — within limits — the technique estimates the absolute age of a once living thing. For example, by radiocarbon dating the wood charcoal found in an ancient campfire, the archaeologist can gain a pretty good idea of when the fire burned.

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Figure 4
Owl effigy pipe, Ohio pipestone
 Height 12 cm
 Madisonville site
 Peabody Museum of Archaeology and
 Ethnology, Harvard University
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Radiocarbon dating of archaeological remains is one of the keys to constructing valid absolute cultural chronologies; when used in conjunction with techniques designed to measure the relative age of an object or group of objects, extremely useful cultural chronologies can be constructed.

One of the most important relative dating techniques archaeologists use depends upon the knowledge that the ways humans make things change, and do so on a regular basis. People are fickle. Think of the changing styles and fashions in our own society, and you'll get the picture. Styles also changed regularly in the past. By studying artifacts from ancient Fort Ancient village sites, it is possible to examine how and when styles changed over the 650-year span of their culture.

Because only durable artifacts survive for archaeologists to study (clothing, for example, is seldom, if ever, preserved), pottery is an ideal subject. Not only was it produced in abundance, pottery also survives hundreds, or even thousands of years of burial in the ground. Archaeologists study pottery to determine changes in style and to date archaeological remains. Fort Ancient peoples made extensive use of pottery for cooking and storage, and fragments of broken pots are one of the most common artifacts found in their abandoned village sites.

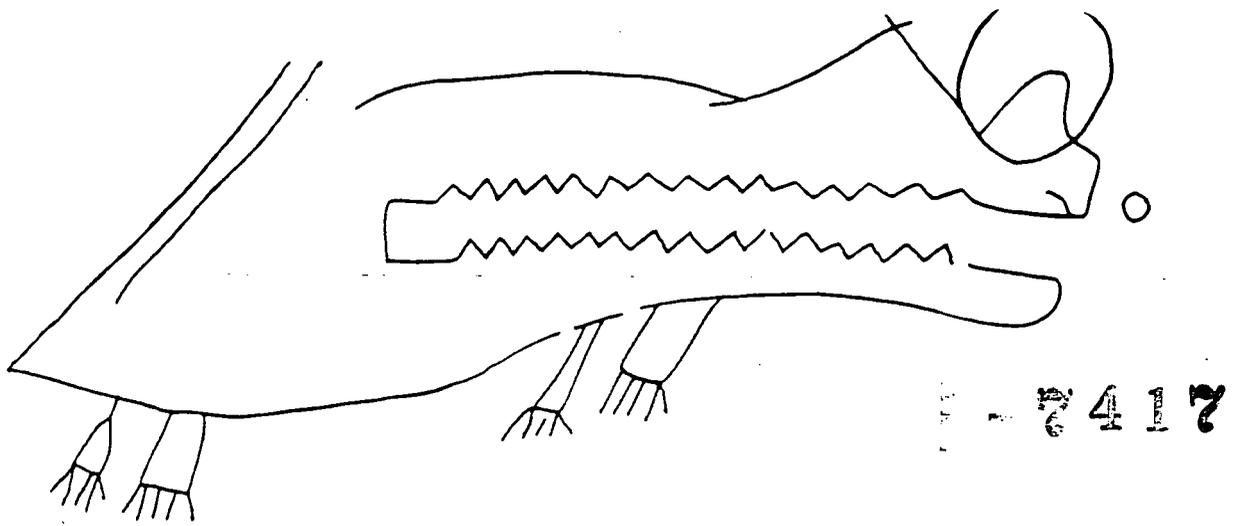
Before a pot was fired, Fort Ancient potters often decorated the moist or leather-hard clay with lines, slashes, and punctations — punch marks — in a variety of pleasing designs. By studying these decorative motifs, archaeologists can group Fort Ancient village sites that share similar kinds of decorations. When used in conjunction with radiocarbon dating, the study of ceramic styles in a region is a powerful tool for ordering the past.

Such a chronology has now been constructed for the Fort Ancient societies in the Tri-state, and archaeologists can now begin to answer questions of cultural change that were only partially understood before.

THE ORIGINS OF THE FORT ANCIENT PEOPLES

There is little question that the earliest Fort Ancient societies were the direct descendants of peoples who had been in the Ohio Valley since the end of the Ice Age more than 10,000 years ago. Fort Ancient peoples were simply the last of these societies.

The Paleolndians (12,000-8000 B.C.) were the first to enter the Ohio Valley. As world-wide climate warmed at the end of the Ice Age, these hunters and gatherers migrated into the valley. The Paleolndians shared their world with a variety of now-extinct Ice Age animals such as elephants and bison, occasionally hunting these



giant beasts. Smaller game and plant foods provided the majority of their diet, however.

As the climate continued to warm, and Ice Age vegetation was replaced by the forests we see today, the PaleoIndian culture evolved. By 8000 B.C., new tool technologies heralded the beginning of the Archaic period (8000-1000 B.C.). Archaeologists have arbitrarily divided this long time interval into Early, Middle and Late periods. Throughout the Archaic period there was a general trend towards increasing human population levels, greater sedentism and increased regional diversity. Towards the end of the Archaic period simple garden horticulture was practiced in many areas. Squash, gourds, and several other local domesticates were grown in these early gardens. Foraging for wild plant and animal foods dominated the Archaic economy, however.

The Woodland Period (1000 B.C.- A.D. 1000) arbitrarily begins with the introduction and/or local development of ceramics, and an increased level of dependence on garden horticulture. Like the Archaic, the Woodland period is also divided into Early, Middle and Late segments. In the Tri-state area, mortuary ceremonialism reached a peak with the Early Woodland Adena (1000 B.C. - 200 B.C.) and Middle Woodland Hopewell (200 B.C. - A.D. 450) peoples. These groups are best known for their monumental earthworks such as conical burial mounds and the elaborate mortuary art they contain.

Late Woodland Newtown (A.D. 450-1000) peoples were the immediate ancestors of the Fort Ancient folk. By A.D. 450-500 Newtown groups lived in small, often circular villages on river terraces and uplands overlooking the river valleys. A focal point of at least some of these villages was a plaza — a public space reserved for important rituals and community-wide ceremonies. Although no Newtown village has been completely excavated, there is little evidence that any were fortified with a defensive stockade — a situation that changes with the emergence of the first Fort Ancient towns.

These Late Woodland Newtown villages are important, for they signal a marked change in the distribution of the human population across the Ohio Valley landscape. Earlier, Middle Woodland Hopewell peoples were dispersed in small hamlets or clusters of houses. The Newtown villages were probably only seasonally occupied, but they are important, for they foreshadow the truly permanent villages that mark the emergence of the Fort Ancient peoples.

In large part, the increased sedentism reflected in the Newtown villages was supported by extensive garden horticulture. The study of plant remains from archaeological sites in the Ohio Valley suggests that Newtown groups were growing a wide variety of crop plants indigenous to the eastern woodlands. This so-called "Eastern Agricultural Complex" included maygrass, sunflower, and domesticated

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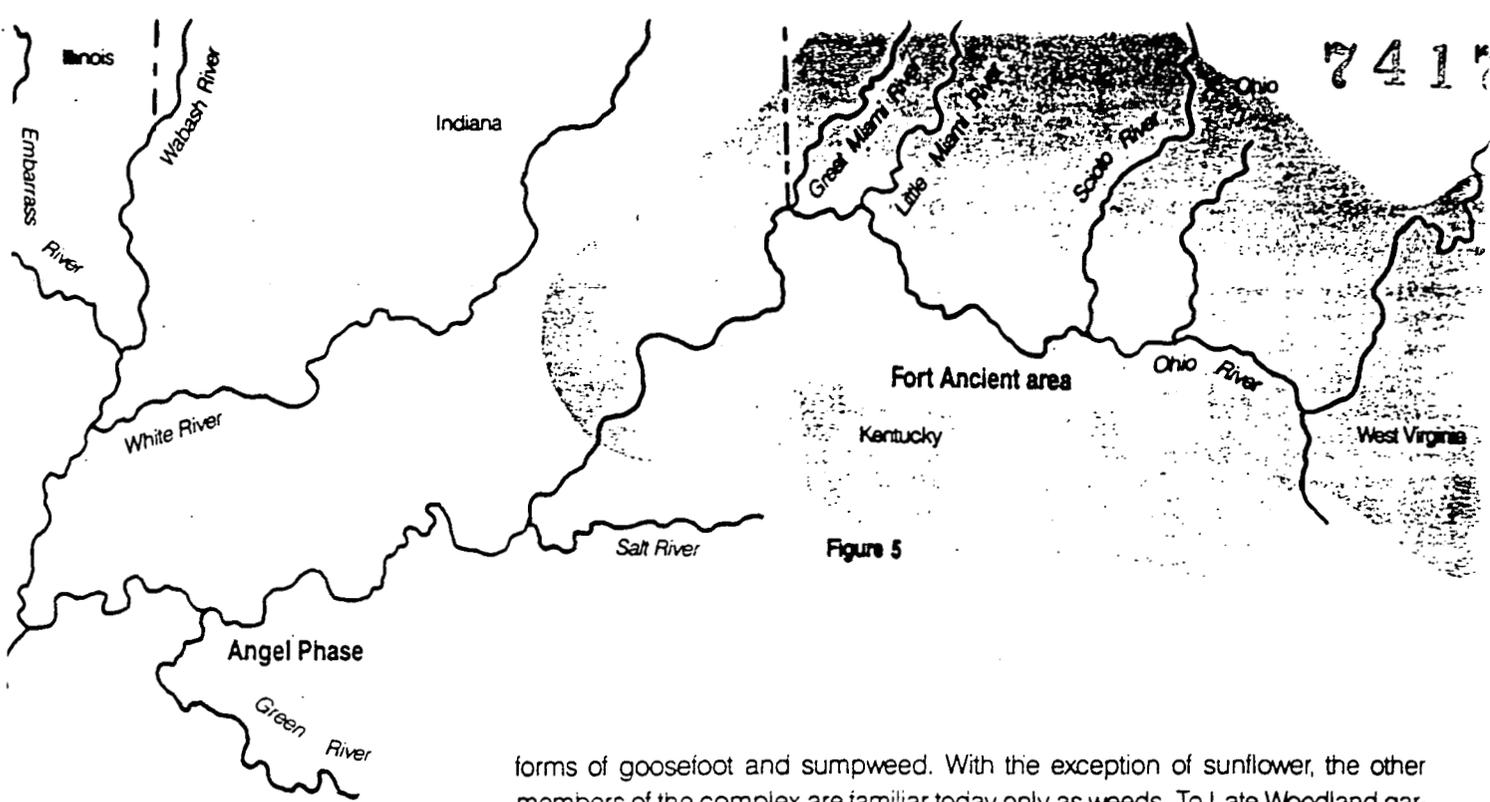


Figure 5

forms of goosefoot and sumpweed. With the exception of sunflower, the other members of the complex are familiar today only as weeds. To Late Woodland gardeners, however, the starch and protein provided by the seeds from these plants were vital supplements to a diet dominated by wild plants and animals. Squash and gourds were likewise part of the complex, though it is clear they were probably grown more for their woody shells and their seeds than for their flesh.

Sometime between about A.D. 800 and 1000, maize, along with a number of other cultural innovations, was adopted by Newtown populations. Most of these innovations — including the replacement of crushed rock with burned and crushed mussel shell as a tempering medium for ceramics, the adoption of new vessel forms, the bow and arrow, and a host of other material traits — apparently entered the middle Ohio as a result of contact with other late prehistoric societies in the lower Ohio Valley and the upper reaches of the Tennessee-Cumberland drainages. It is this point, most archaeologists agree, that marks the beginning of the Fort Ancient period.



Figure 6

Figure 5

Map of the Ohio Valley showing the Fort Ancient and Mississippian areas

Figure 6

Turpin Phase plain jar
Dearborn County, Indiana
Height 15 cm
Glenn A. Black Laboratory of Archaeology

Figure 7

Guilloche design on Turpin Phase cordmarked jar
Turpin site, Hamilton County, Ohio
Height about 10 cm



Figure 7

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**A FORT ANCIENT CHRONOLOGY
FOR THE TRI-STATE:
CULTURAL CHANGE AND CONTINUITY
IN LATE PREHISTORY**

In recent years archaeologists in southern Ohio have placed a great deal of emphasis on constructing a Fort Ancient chronology. The chronology that follows is based primarily upon radiocarbon dating and the study of ceramic motifs from more than fourteen Fort Ancient sites in the Tri-state. Other artifact styles have also been found to be sensitive indicators of change. Based upon these various lines of evidence, it is possible to recognize at least three broad periods of Fort Ancient development in the Tri-state. As more research is conducted, it is likely these periods will change slightly, and more subdivisions will be recognized.

**THE EARLIEST FORT ANCIENT PEOPLES:
THE TURPIN PHASE (A.D. 1000-1250)**

In southwestern Ohio the transformation of local Newtown societies into maize farmers apparently occurred quite rapidly between A.D. 800 and 1000. There is little question that the initial "kick" that spurred these changes traveled up the Ohio River from Mississippian Angel Phase societies in southwestern Indiana and western Kentucky (Figure 5). These downriver peoples were also maize agriculturalists, who shared many of the characteristics of the Fort Ancient peoples. Their artifact styles and form of social organization, however, are distinctly different.

The earliest Fort Ancient sites form a fairly cohesive group that has been referred to as the Turpin Phase. The phase takes its name from the Turpin site on the Little Miami River in Hamilton County, Ohio. Other Turpin Phase sites are located in the Great Miami and Whitewater drainages, and occur as far west as Laughery Creek in Ohio County, Indiana. As more research is concentrated on this early phase, it is probable that early and late Turpin developments will be recognized.

Turpin Phase pottery and other artifacts clearly reveal the impact that societies outside the Tri-state area had on the emerging Fort Ancient peoples. Pottery is almost exclusively shell-tempered, and is often quite plain (Figure 6). Sometimes the neck of the jar was incised with a series of interlocking lines called a guilloche (Figure 7). Other simple incised designs occur in lesser frequency. Handles also occur on Turpin Phase pots — for the first time in the middle Ohio Valley.

Contacts with Mississippian peoples further to the west are mirrored in fragments of trade-ware (pottery that was made elsewhere) and designs on locally produced pots that imitate styles elsewhere. The so-called "Ramey-Incised" motif, found on early Mississippian pots in the East St. Louis, Illinois area, for example, has striking local counterparts (Figure 8).

The interaction between Fort Ancient and Mississippian populations during the Turpin Phase is also recognized in other items of material culture. Spatulate-shaped stone axes, often thought to be a symbol of personal power among Mis-



Figure 8

Figure 9

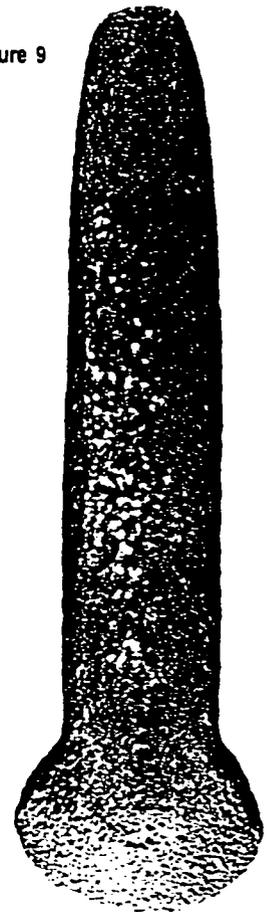


Figure 8

*Turpin Phase jar with Ramey-like design
Turpin site
Height 16 cm*

Figure 9

*Limestone spatulate type celt
Guard site, Dearborn County, Indiana
Length 18 cm
Private collection*



Figure 11

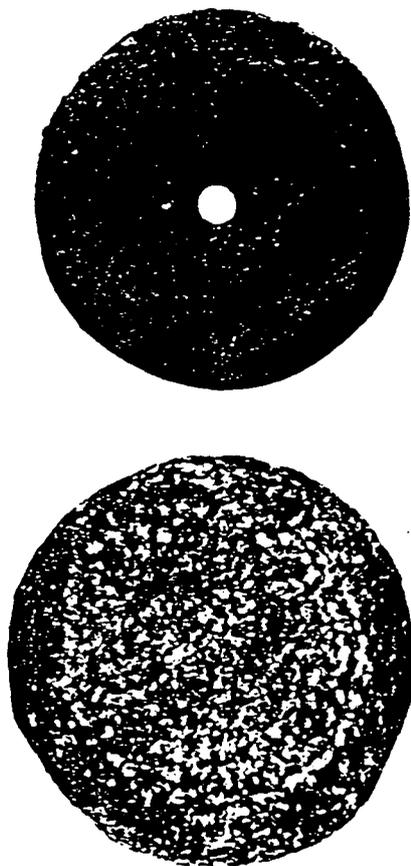


Figure 10

Figure 10
Stone discoidals
Turpin site
Diameter of largest 4 cm

Figure 11
Burial mound, Turpin site, about 1888
Metz papers
Cincinnati Historical Society

Figure 12
Schomaker Phase jar with guilloche incising
Watson site, Butler County, Ohio
Height 12 cm



Figure 12

Mississippian elites, have been found at some of the Turpin Phase sites (Figure 9). Stone discoidals, used for playing the southeastern game of "chunky" (Figure 10), triangular-shaped flint arrowpoints, and the falconid or "weeping eye" motif also represent distinctly Mississippian cultural traits. Wall-trench style architecture has also been recorded at three Turpin Phase sites. This technique of house construction, in which a "footer" is dug and individual posts set within the trench, is a uniquely Mississippian architectural style. Despite the presence of these cultural traits on Turpin Phase sites, Fort Ancient people remained distinct from the Mississippians further west.

Turpin Phase settlements are larger than the preceding Late Woodland Newtown villages, and at least some possess a central plaza. Some, but not all sites appear to have been encircled by a stockade made of large, upright timbers. It is unknown if these walls served a defensive purpose.

Two distinct modes of disposal of the dead were practiced by Turpin Phase societies. Mounds (Figure 11) served as cemetery areas for at least a portion of the population, while the remainder were interred in shallow graves within the village area. Non-mound burial also took place in box-like "coffins" made of large slabs of limestone. Although grave goods are sometimes associated with interments, more often than not the graves are devoid of artifacts.

Unfortunately, it is presently impossible to determine if all of the Turpin Phase sites in the Tri-state area were occupied simultaneously. If so, then a sizeable human population was present in the middle Ohio Valley between A.D. 1000-1250. There are, in fact, more early Fort Ancient village sites than later ones. Whether this represents a true population peak is not known, and is a problem that deserves further research. Whatever the case, after A.D. 1250 Fort Ancient sites in the Tri-state decline sharply in frequency.

THE SCHOMAKER PHASE (A.D. 1250-1350 to 1400)

The Schomaker Phase probably represents an outgrowth of the earlier Turpin Phase. This middle period of Fort Ancient development is based primarily upon a distinctive ceramic industry. Most vessel necks are decorated. The curvilinear guilloche is most common (Figure 12), but line-filled triangles, often accompanied by punctations, are frequent. Handles are also often decorated. Compared with the simpler Turpin Phase ceramics, pottery decorations in the Schomaker Phase seem almost baroque (Figures 13-15).

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Figure 13

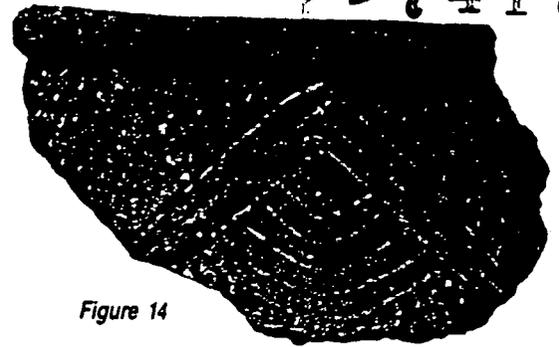


Figure 14

Schomaker Phase villages are fewer in number than Turpin Phase villages. At least two of the sites — one along the Little Miami, and one along the Great Miami — are located on high, defensible bluff tops. By A.D. 1350 only one major village was located in all the lower Great Miami Valley; a similar situation may have been true in the lower Little Miami. Although it is possible that other major Schomaker Phase villages will be discovered in the future, for the time being archaeologists suspect this decrease in sites may signal a decline in human population during the latter parts of the phase.

The Schomaker site (the village for which the phase is named) is situated on a low rise paralleling the Great Miami River. Recent Museum excavations have disclosed a village that originally covered about 1.6 hectares (about four acres) and was probably occupied by several hundred people. As with earlier villages, houses were arranged in a broad circle or oval around a public plaza. Unlike Turpin or Newtown Phase houses, however, Schomaker Phase dwellings were built partially underground. These "pit" or semisubterranean dwellings provided the villagers warmth in the chilly winter, and coolness in the hot humid summers.

Schomaker Phase farmers devised new techniques for storing their agricultural products. Turpin Phase pits were most often shallow, irregularly shaped depressions in the ground. After A.D. 1250, pits were carefully constructed cylinders, dug with straight walls and flat bottoms. Averaging about a meter (a little over three feet) in diameter, these underground silos ranged in depth from a meter to nearly two meters. Assuming the majority of the corn stored in the pits was shelled, some of the pits could have held as much as 45 to 50 bushels of maize.

Burial patterns during the Schomaker Phase are also different from those of the Turpin Phase. Mound building apparently ceased sometime after A.D. 1250; nearly all Schomaker Phase burials are located in a belt ringing the village plaza or scattered among the dwellings.

Archaeologists are uncertain what happened to the first farmers between A.D. 1350 and 1450 or so. While sites have been excavated that are radiocarbon dated to this interval, the artifacts recovered show little resemblance to those from the Schomaker Phase. After A.D. 1350, ceramics change drastically; decorated pottery, for example, all but disappears. These changes mark the beginnings of the Mariemont Phase.

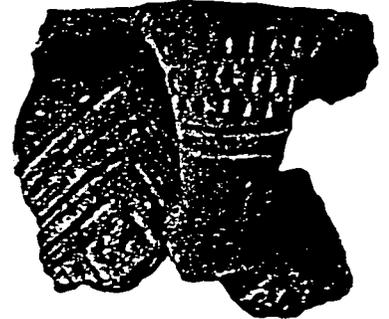


Figure 15

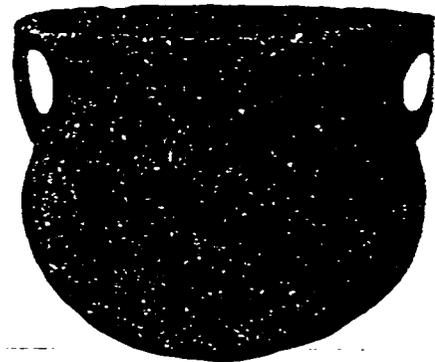


Figure 16

Figures 13-15
Schomaker Phase incised ceramics
Schomaker site, Hamilton County, Ohio
Height of tallest about 9 cm

Figure 16
Mariemont Phase simple-stamped jar
Madisonville site
Height 13 cm



Figure 17



Figure 21

Figure 17

Mariemont Phase check-stamped jar with decorated handle

Madisonville site

Height 16 cm

THE MARIEMONT PHASE (A.D. 1450-1670)

Based upon present evidence, by A.D. 1450 only one or two sites in the entire lower Miami valleys were still occupied. The best known of these is the Madisonville village. Although excavated over 100 years ago, the information retrieved by the Literary and Scientific Society of Madisonville and Harvard teams is providing new and exciting information. These century-old collections demonstrate the important role that museums play in preserving the cultural history of our nation.

This last period of development, the Mariemont Phase, ended about 100 years before the founding of Cincinnati in 1788. By 1670, many of the Fort Ancient Indians (by this time, probably identifiable with the historically recognized Shawnee) had died from European-introduced diseases and the remaining people had been driven from the middle Ohio Valley. But there is little question that populations had been in decline for a long period of time; this trend was simply accelerated in the Mariemont Phase.

A number of unique material traits link the Mariemont Phase sites. These include distinctive ceramics and bone and stone tools, mortuary customs, and the presence of European-manufactured goods.

The burial customs of the Mariemont peoples have luckily left the archaeologist a veritable bonanza of pots to study. Many of the Mariemont graves contain one, and sometimes more, small pots. Often these were placed near the head or waist of the body, and probably contained special food to sustain the individual in the afterlife. Most of these pots were made especially as grave furniture, though they replicate pots used for everyday activities. Although pots had sometimes been included in Turpin and Schomaker Phase burials, they are comparatively quite rare. As a consequence, pottery from these earlier periods generally consists of broken pieces, not whole pots.

Mariemont ceramics are by and large quite plain compared to earlier types (Figure 16). The most common form is a globular jar with an undecorated neck and a strongly flared rim. Often the neck is notched to achieve a "pie-crust" appearance. In contrast to earlier jar types, which had two thick, strap-like handles, Mariemont Phase pots more commonly had four thin, often graceful appendages. Occasionally, a potter would add a strip of clay to the handle or even cut a small opening to enhance its appearance (Figure 17). Although the globular jar with four handles was the most frequently made form, shallow pans and bowls were also created. These basic forms were sometimes modified to reflect the Mariemont Phase belief system.

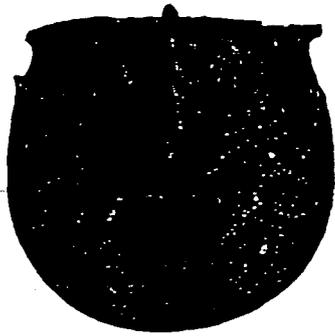


Figure 18

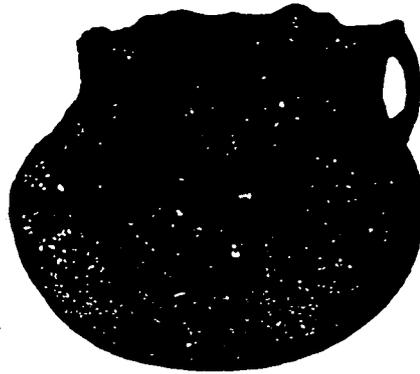


Figure 19



Figure 20

A few small jars from the Madisonville site are decorated with what appears to be a salamander climbing up the side of the vessel (Figure 18). Even more rarely, jar handles are modified to form a mammal — perhaps a flying squirrel — that perches on the rim of the pot (Figure 19). Two forms — a pot molded with a face probably depicting a dead person (cover) and a jar perched atop a clay pedestal (Figure 20) — are even more infrequent. The meanings of these forms are lost to us, but almost certainly they carried with them great symbolic connotation.

A variety of bone and stone tools also serve to distinguish the Mariemont from earlier phases. Bone tools that are unique to the Mariemont Phase include arrowshaft wrenches (a tool used to straighten arrows), armbands, and harpoon heads made of antler. Spades and cutting tools made of elk antler are quite common, and hide scrapers manufactured from the bony projection of the hump vertebrae of American bison also occur. Finely chipped bi-pointed flint knives and small scrapers meant to be hafted in a handle are also common. Like the bone tools just noted, they have no precedents in earlier phases.

Interestingly enough, the old form of village arrangement with houses constructed around a central plaza seems to have been abandoned by Mariemont times. Unfortunately, the early excavators of the Madisonville site did not notice postmolds at the site, and as a consequence did not record house patterns. Up the Ohio, however, sites contemporary with Madisonville reveal that late prehistoric and protohistoric (just before recorded history) villages were often nothing more than hodgepodes of houses with no particular village arrangement. Furthermore, many of the houses are three to four times larger than Turpin or Schomaker structures, suggesting they served the needs of several families.

European-made objects of brass, copper, iron and glass help to fix the end of the Mariemont Phase at the Madisonville site to about the middle of the seventeenth century (Figure 21). On the basis of these items, there is good reason to believe that the site was occupied by the historically recorded Shawnee Indians.

The historic goods are quite rare, and suggest that the Madisonville residents probably did not have any sustained contact with Europeans. In fact, it is quite possible the handful of metal and glass objects discovered in the graves and pits at Madisonville were originally obtained from other Indians who were in more regular contact with Europeans. Even the origins of these trade items is unknown; they could have been obtained from French traders to the north or from Spanish missions in Florida.

Figure 18

Mariemont Phase cordmarked jar with salamander applique
Madisonville site
Height 16 cm
Cincinnati Art Museum
Gift of Judge Joseph Cox

Figure 19

Mariemont Phase cordmarked jar with effigy handles
Madisonville site
Height 15 cm

Figure 20

Mariemont Phase cordmarked jar on pedestal
Madisonville site
Height 19 cm
Cincinnati Art Museum
Gift of Judge Joseph Cox

Figure 21

Copper or brass crucifix-like pendant
Madisonville site
Length 11.5 cm
Peabody Museum of Archaeology and Ethnology, Harvard University
84-68-10/35537

FORT ANCIENT LIFEWAYS

There is a common tendency for modern Americans to believe that the world of the American Indian hundreds or thousands of years ago was somehow more "primitive" than that of today. Native American life is viewed as harsh, and what social order existed is believed to have been little better than lawlessness. Hunting and fishing are viewed as the main pastimes of the Indian, with starvation lurking just around the corner. On the other hand, Indians are also seen to have lived "closer to nature," or "in harmony with nature." These unhappy beliefs are nurtured by television, movies, historical literature, and, worst of all, our primary educational system, which teaches us that the history of America began with its "discovery" by Columbus. In fact, the vast, unwritten history of our continent derived from archaeology reveals another story.

FORT ANCIENT SOCIAL ORGANIZATION

The social organization of a society is the sum total of all the relationships that people have to one another. Social organization provides a frame of reference for every individual in a society; this framework allows people to determine whether someone is kin, prescribes whom someone may marry or otherwise associate with, and so on. It is these day-to-day relationships that hold a society together. Terms such as uncle and aunt, cousin and grandfather, conjure up specific meanings to us. Naturally, it is not possible for archaeologists to ask a Fort Ancient Indian about his or her family members, or which people were considered friends and which considered enemies. Like other societies that possess no written language, the Fort Ancient peoples had a rich oral tradition that allowed this complex information to be passed from one generation to the next. This is not the sort of thing that it is possible to recover archaeologically, however.

Although the details of Fort Ancient social organization are probably lost, certain archaeological lines of evidence can provide clues to understanding the broad outlines. In addition, archaeologists are fairly certain that at least the latest Fort Ancient peoples can be identified with the historically recorded Shawnee. When archaeological clues are combined with ethnohistorical evidence (i.e., the interpretation of archaeological evidence through written records) from the Shawnee Indians who were living here in the mid-eighteenth century, we can at least make some intelligent guesses.

The basic building block of early Fort Ancient society was the nuclear family (parents and their offspring); five to six individuals would have made up the average family. Villages were composed of a number of households, with each family responsible for producing its own food and material goods (tools, clothes, etc.). Within each village certain individuals were likely recognized as superior craftsmen, and their stone tools or soft leather products, for example, could have

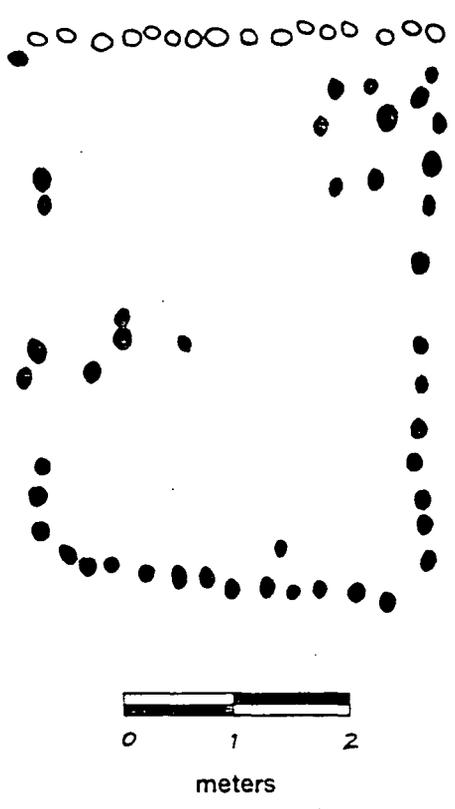
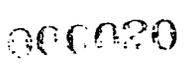


Figure 22
Early Fort Ancient house
Turpin site



been acquired through exchange. All in all, however, the activities of one family tended to duplicate those of another.

Most tasks were divided along sexual lines. In general, men probably did the heavy work of clearing new fields and building new houses. They hunted and fished, and provided most of the animal protein the village needed. Women were most likely responsible for planting and hoeing the fields, harvesting the crops, collecting wild plants, and almost all domestic activities. It is safe to say that although respected as equals, women did most of the work — and much of it was drudgery.

By studying the floor plans of abandoned Fort Ancient houses, it is possible to detect shifts in social organization through time. Turpin and Schomaker Phase houses, for example, are more or less similar in size. They were clearly designed as single-family dwellings (Figure 22). After A.D. 1450, however, the pattern changes dramatically, and large multi-family dwellings become the dominant form of housing (Figure 23).

A special type of organization known as the clan probably served to integrate diverse Fort Ancient families into cohesive units. The clan is based upon the principle of the lineage. A lineage is simply a group of people who are related to one another through a common founding ancestor. The clan generally takes its name from some animal or plant that was believed to have brought special information or luck to the founding ancestor. These animals were considered sacred to the clan members and were treated with special respect and reverence.

Shawnee clans (and thus, by inference, Fort Ancient clans) were patrilineal (descent reckoned through the male line). Clan membership was determined by birth. In societies where patrilineal clans are the rule, a child becomes a member of his or her father's clan.

Almost all clans have rules that dictate relations, both with other clan members and with villagers as a whole. One of the most important of these is the rule of exogamy — a rule that forbids the marriage of two members of the same clan. This rule is important, for it means that each household is composed of members of two different clans, and that many clan members are only fictively and not consanguineally (by blood) related to one another. Through time, as both clans and villages grow, an elaborate web of clan and family ties becomes spun, eventually linking the entire village in a series of complex social relationships. More often than not, the same clan occurs in more than one village, and members of the same clan, even in distant villages, are considered kin. And, since clan membership carries with it obligations to other clan members to provide aid in times of need, the clan becomes an important agent for promoting group solidarity and well-being within and between villages.

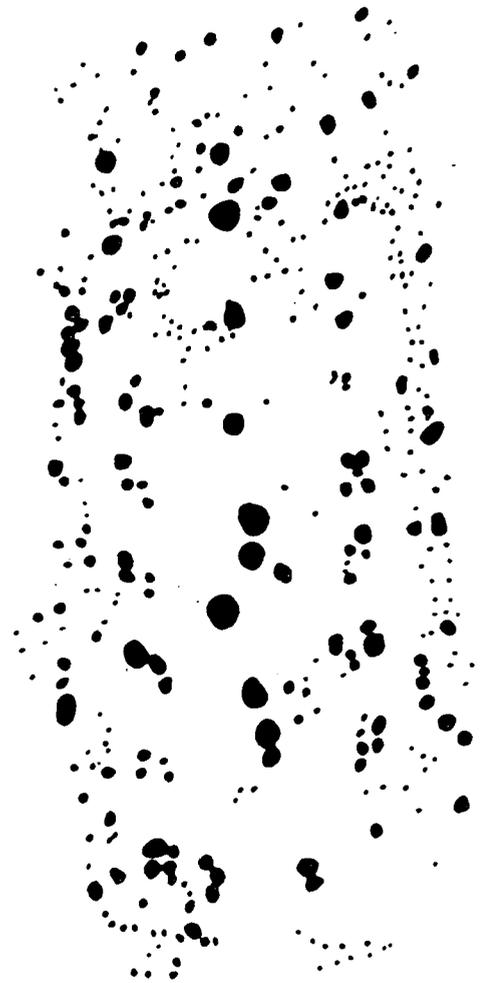


Figure 23
Late Fort Ancient house
Hardin Village site, Greenup County,
Kentucky

000021



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Archaeologically, it is difficult to detect clans, descent groups and so on, but detailed studies sometimes reveal tantalizing clues to past forms of social organization. For example, at the Incinerator site, an early Fort Ancient village near Dayton, Ohio, archaeologists from the Dayton Museum of Natural History are just beginning to piece together the results of nearly 15 years of excavation. An examination of the pottery from different parts of the village reveals that there are at least four different residential areas, in each of which the pottery is stylistically similar. The archaeologists working at the site interpret these areas as four kin groupings within the village.

FORT ANCIENT SUBSISTENCE

Agriculture

Within a village, each household was responsible for providing the food and materials needed to support the family throughout the entire year. If historic accounts are correct, maize — corn — provided about 50 to 75 percent of the diet for at least some Eastern Woodland agriculturalists. As has already been mentioned, the Fort Ancient peoples were the first truly agricultural societies in the middle Ohio River Valley. But precisely what is agriculture? Why were the Fort Ancient peoples different from those Native Americans who were here earlier?

Agriculture is a strategy of plant cultivation that can be contrasted with garden horticulture. True field agriculture is distinguished by the creation of an artificial environment — the field — devoted to the production of one, or at most a few, species of plants. The plant or plants grown in the field are dietary mainstays. Horticulture, on the other hand, is a gardening practice that is smaller in scale. Here the emphasis is on variety; the plants grown in a garden might include condiments, spices, pot herbs, and the like. None of these are meant to be staples. The family vegetable garden that many of us grow in our backyards is a familiar example. Tomatoes, cucumbers, and snap beans add variety to our meals, but the amounts produced in the average garden could hardly sustain a family for the entire year.

Fort Ancient farming was extremely labor intensive, and required careful planning. Climbing onto a monstrous tractor pulling an equally enormous plow to break up the soil was not an option that the first farmers could exercise. Instead, they broke up the soil with simple but effective hoes, shovels, and rakes made of antler and shell (Figure 24). And because these tools worked better in loose, friable soil, the first farmers were naturally restricted to the fertile levees of the major rivers. Only when the steel plow was introduced by European farmers could the tough clays of the uplands effectively be cultivated.

Figure 24

Agricultural implements: elk antler spade, diorite axes, shell hoes

Length of longest 26 cm

Madisonville and Turpin sites

000023

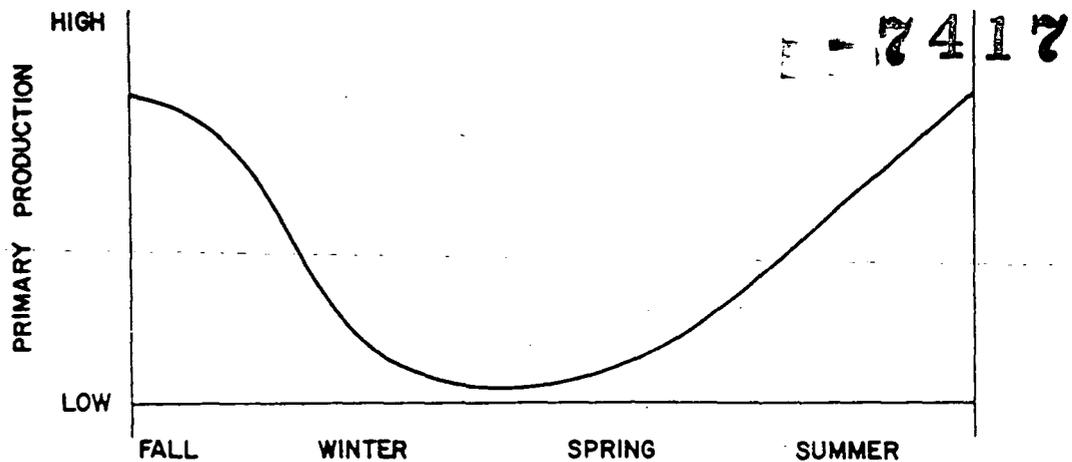


Figure 25

Once a suitable tract of land was selected, a major hurdle had to be overcome: clearing the virgin forest. Carefully polished stone axes (Figure 24) were used to clear away as much of the undergrowth as possible. Smaller trees and shrubs were piled in heaps until they were dry enough to burn. Deep incisions were hacked around the larger overstory trees, and during the course of a year or more the girdled trees would slowly die. The dead vegetation was next burned. Only then would the plot be ready for planting.

Corn was planted in hills staggered two to three feet apart. Seeds of beans (the common, or "kidney" type) were also planted in the hills, and allowed to climb up the stalks of the growing corn. Pumpkins, gourds, tobacco, and sunflower were grown in the same field.

Historically, Indian farmers in the East hoed their crops only twice during the course of the growing season. To the modern farmer, a Fort Ancient field would almost certainly be a nightmare to behold; besides the crops that were intentionally planted, dozens of "weeds" competed for available light and moisture. Though undesirable to the modern farmer, these interlopers produced additional food for the Fort Ancient farmer. Like corn and beans, these plants were harvested as they ripened, and added to the family larder. Even abandoned cornfields became the habitat of sun-loving successional fruit plants — wild plum, blackberry, grapes — which were eagerly harvested by the Fort Ancient peoples.

Nor would the modern American farmer like the looks of Fort Ancient corn. The cobs were stubby and produced only eight rows of broad, hard kernels. Often only one ear was produced per stalk. However, this so-called "Northern Flint" variety of corn was amazingly well suited for growing in the eastern woodlands. It could tolerate a wide range of growing conditions, and was adapted to a short growing season. From the Great Lakes to the Bluegrass region of Kentucky, from the Ohio Valley to the Atlantic Ocean, this hardy corn was the major type grown by Native Americans throughout the Midwest and Northeast.

In a good year, perhaps as many as 35 to 45 bushels of corn could be produced per acre, and a family probably needed about 60 to 70 bushels per year. Sometimes a surplus might be produced that could be used for trading, or to ease the shortfalls of relatives or clansmen. But agriculture was also sometimes a gamble. Natural forces beyond the direct control of the Fort Ancient farmers periodically wreaked havoc on their fields. Occasionally a withering late spring frost blackened the emerging crops, or a violent summer thunderstorm flattened the fields, or green stalks were shriveled by drought. Diseases raced from ear to maturing ear, leaving empty cobs. In spite of the fact that cornfields were patrolled by women and children, at dusk and dawn white-tailed deer emerged from the forest to feast; during the day crows and blackbirds attacked the ripening corn; at night raccoons,

000024

Figure 25

Primary production in Eastern North America

skunks, and opossums did their damage. These natural forces placed limits on the growth and ultimate evolution of the Fort Ancient societies; farming was a risky business.

In addition, the Fort Ancient family had to face another harsh reality of life in the Ohio Valley. For much of the year fresh food (both wild plants and animals were hunted and collected in quantity by the first farmers) could be counted on to supplement a diet dominated by maize. But between late November and early April — roughly one quarter of each year — natural production of food comes to a standstill as winter locks the landscape in its grip. Fresh plant foods are unavailable, and animals deplete their body fats to survive.

Fortunately, this pattern is predictable, following a more or less "U-shaped" curve of production (Figure 25). The impact these seasonal changes have on human nutrition is quite clear. The winter and early spring months are periods of stress. Food cannot be produced, nor can it be easily collected. The Fort Ancient peoples had two options to cope with these months of need. They could migrate to areas where food was available or they could store food for winter and early spring use. Since it was difficult to migrate without impinging on the territory of another group, most often storage was the option employed.

In those years when everything went well, a large volume of food was produced in Fort Ancient fields. What happened to the harvest? Where did a Fort Ancient family put 60 or 70 bushels of corn?

Prehistoric farmers preserved dried agricultural produce in deep underground pits one meter or more in diameter, as much as two meters deep, and capable of holding 30 to 40 bushels of shelled corn. These below-ground silos were dug into well-drained soil and then lined with a thick layer of mold-resistant big bluestem grass. The grass was kept in place with small wooden poles and pegs. The bottom of the pit was also lined with small poles, which were covered by a dried skin (Figure 26).

Dried corn on the cob was next stacked up around the interior edge, and shelled corn was poured into the central space. A lid of grass, poles, and skins covered the top of the pit and kept the contents dry. Very little of the corn spoiled. Water did not run into the covered pit, and the grass absorbed moisture that seeped in from the sides. Historic accounts suggest that Indians in the Northeastern United States stored corn in pits for as long as a year.

Storage pits represented a sort of insurance policy for the first farmers. They contained provisions that could be drawn upon during the winter and early spring months when naturally available foods were scarce.

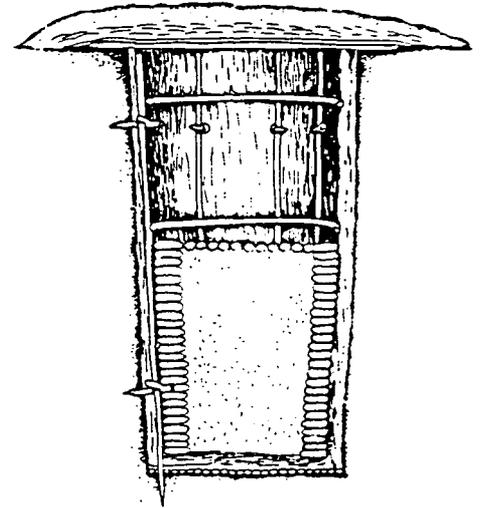


Figure 26

000025

Figure 26

Cross-section of a Fort Ancient storage pit

The consequences of maize production

The production of a surplus allowed the maize farmers to cope with the unpredictable food sources supplied by wild plants and animals. Since the crops they grew could be safely stored for long periods of time, it meant security for the winter months. Unfortunately, it was also a burden.

Maize in some form was probably eaten day in and day out, almost 365 days of the year. The consequences of this carbohydrate-dominated diet are frightening: chronic malnutrition, excessive rates of infant mortality, and — because of crowded village conditions — increased rates of communicative disease throughout the 25 generations of Fort Ancient development. Periods of stress are reflected in interruptions in the growth of long bones and teeth. Tuberculosis and bone lesions are common in some of the Fort Ancient populations. Cavities, massive abscesses, and periodontal diseases were so common that an army of modern dentists would have been kept busy for a lifetime drilling, filling, and pulling. Overall, the Fort Ancient peoples suffered worse health than any of their predecessors. But they survived.

Hunting, fishing and collecting

Although farming provided the mainstay of the diet, important dietary protein and variety were added through hunting, fishing, and collecting wild animals and plants. Much of this bounty was reaped in a seasonal round of subsistence activities.

In the spring migratory waterfowl were taken, and succulent greens were plucked as plants began emerging from winter dormancy. In some areas, floods stranded hundreds of fish in shallow backwater lakes and sloughs, providing an easy harvest. Some fish — suckers and other "rough" fish, for example — travel into shallow waters in the spring to spawn. At these times they are often oblivious to outside disturbances, and can be plucked by hand from riffle areas. For the first farmers, tired of a long winter of corn and lean meat, the spring marked a time of renewal and welcome dietary relief.

As the days grew warmer and longer with the advent of summer, succulent fruits were gathered. In fact, the Shawnee names for May, June, July and August each relate to a particular type of fruit; we may suppose this reflects the degree to which these foods were relished.

In summer, fishing by hook and line probably replaced the mass harvesting techniques that could be used in the spring, and snapping and soft-shelled turtles were also taken. After a heavy downpour a walk around the forest edge near the

cornfields was sure to produce a number of box turtles to be stewed; their empty shells made handy dishes, and, when filled with small pebbles, could be used as rattles.

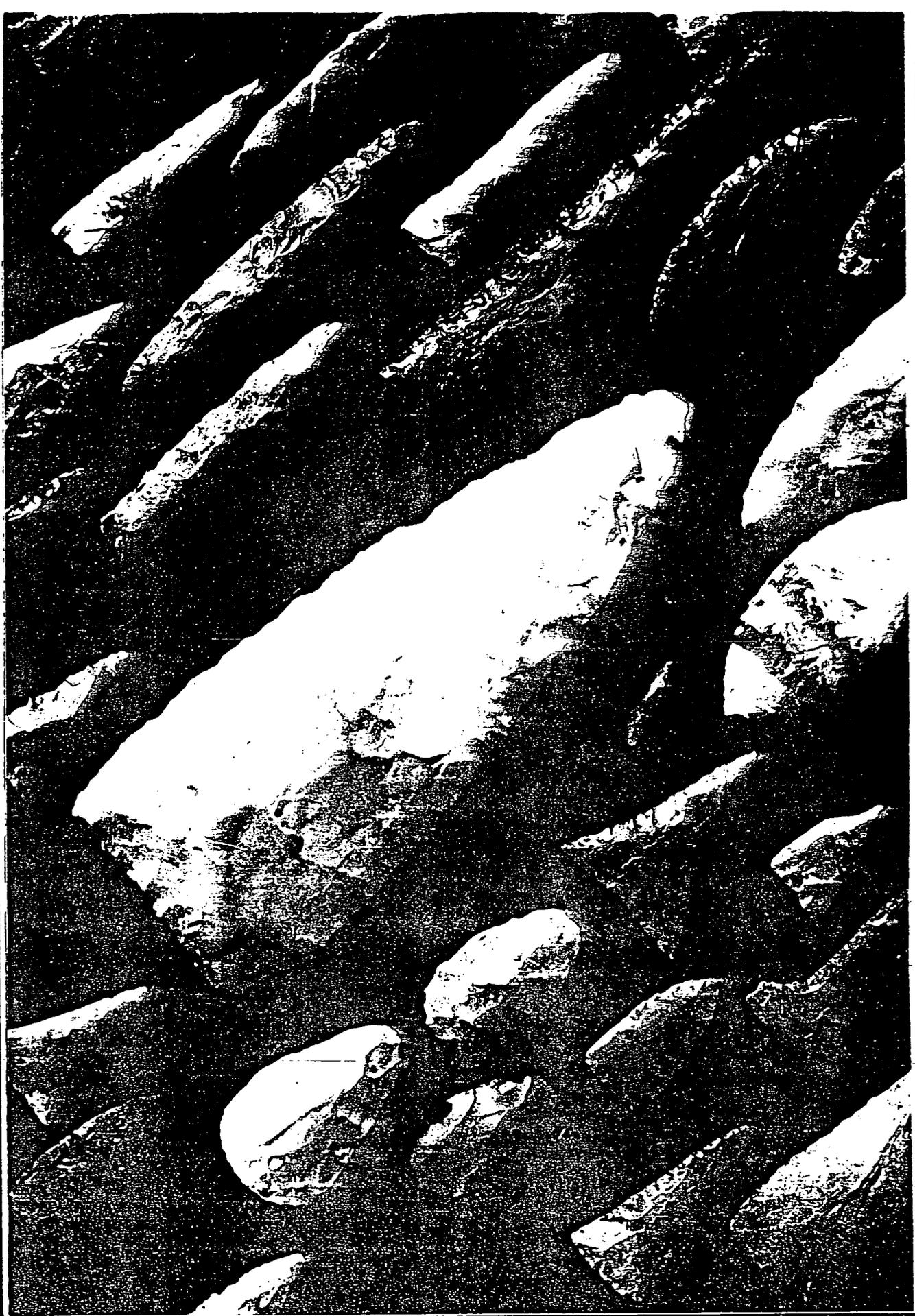
By late summer, water levels in the rivers and creeks had fallen to the point where freshwater mussel beds were easy to reach. The task of collecting these tasty foods probably belonged to women and children. A few minutes of steaming over hot rocks, and the shells of the mussels were easily opened.

The fall was a time for hunting. White-tailed deer, turkeys, raccoons, opossums — in fact, most animals — reach their maximum weight at this time of year, as they accumulate layers of fat for winter reserves. While hunting was considered important throughout the year, a concerted effort was made in the fall. Much of the meat brought into the village was destined for winter use. Cut into thin strips and dried leather-hard on racks in the sun, meat would keep for months on the rafters of their houses, and could be counted on when winter weather made hunting difficult or impossible.

Women and older children ventured outside the village to collect ripe nuts of hickory, butternut, black walnut, chestnut, and hazel. These compact, high calorie packages of carbohydrates, protein, and oil were both eaten fresh and stored for future use. For women, though, the fall was primarily a time for the backbreaking labor of harvesting agricultural products.

Corn was collected in large sacks or baskets and carried back to the village for drying. Ears were spread on elevated racks until they reached the proper moisture content. Dried beans were threshed from their pods, and squash were cut into strips and dried. When the crops were ready, they were carefully placed in the storage pits. The village was now ready to face the winter.

The cold, often rainy weather of winter, coupled with the shortened days, meant that outdoor activities were greatly reduced. Much time was spent indoors repairing tools and making new ones, sewing clothing, and weaving mats and baskets. Men continued to hunt whenever weather permitted, and firewood needed to be gathered from the forest to keep the fire stoked. As the winter progressed, the dried agricultural goods stored in the pits became an increasingly important source of food. If not enough food had been grown the previous fall, late winter and early spring was a time of great privation for the family, and only the change of seasons could bring an end to the hunger.



000028

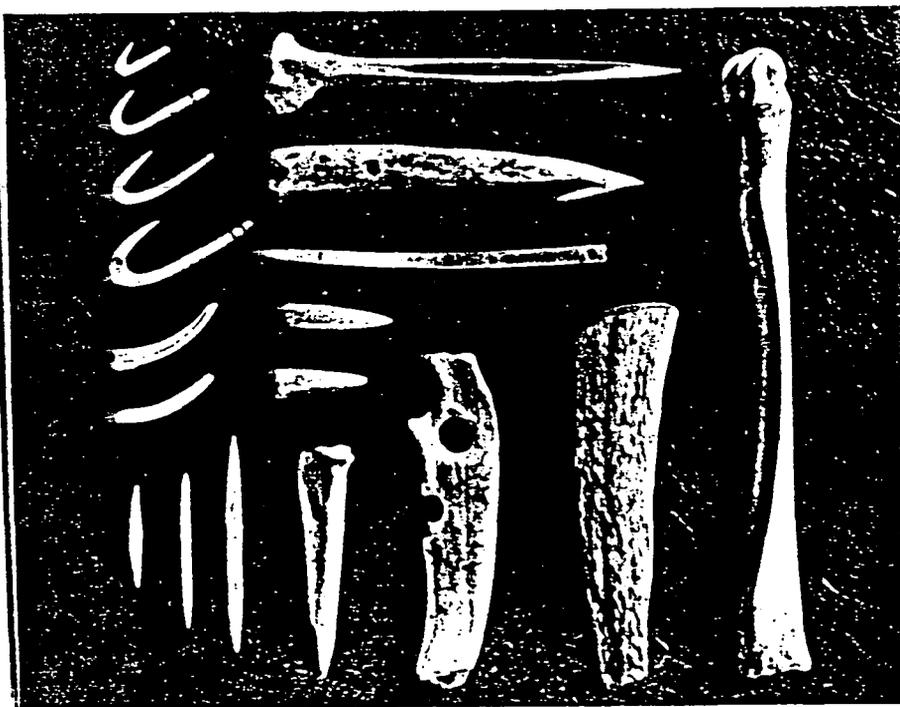
FORT ANCIENT SUBSISTENCE TECHNOLOGY

A people's technology is in part a reflection of how they interact with the natural world. Through tools, people are able to capture energy and put that energy to use. This axiom is a timeless one; both modern and prehistoric tools serve the same ultimate purpose — to transform matter. It would be a mistake to think the Fort Ancient peoples lacked a fully stocked tool chest. In fact, theirs was the culmination of over 10,000 years of experimentation and refinement. Their tools were varied, efficient, and easy to produce.

Flint provided the raw material for arrowpoints, knives, scrapers and drill bits (Figure 27). Hard granitic cobbles brought to the Tri-state by Ice Age glaciers were ground and pecked into sharp axe blades that fitted a socketed wooden handle. Grainy sandstone served to sharpen bone and wooden points.

Antler, bone, and shell were the raw materials for many tools. Antler from deer and elk was worked with flint knives and scrapers to fashion spades and gouges, harpoon heads, and arrowpoints. Bone from deer and other animals provided awls, needles, fishhooks, pins, and hide scrapers (Figure 28). Freshwater mussel shells were used for hoes and spoons.

Sadly for the archaeologist, a vast portion of Fort Ancient material culture was made of wood, bark, and other organic substances that simply cannot survive burial in the ground. This important component of their technology can only be guessed at.



000029

Figure 27
Chipped stone arrow points, knives, scrapers
and drill bits from various Fort Ancient
sites
Length of longest about 10 cm

Figure 28
Worked bone and antler hide scraper, awls,
harpoon head, weaving needle, arrow
points, pins, fishhooks and beaver incisor
chisels
Length of longest 26 cm
Madisonville, Turpin and Schomaker sites

FORT ANCIENT RELIGION AND WORLD VIEW

Like many of the non-material aspects of the Fort Ancient peoples, our knowledge of their religion and world view is scanty. Archaeology does provide some clues, however, and historic accounts of the Shawnee can be used to flesh out the past.

It is difficult for us as twentieth century Americans to understand the world of only a few hundred years ago. While we live in a world dominated by technology, the Shawnee and their Fort Ancient ancestors lived in a world dominated by nature. Natural forces that we relegate to mundane changes in atmospheric pressure and the passage of weather fronts were seen by the Fort Ancient peoples as controlled by supernatural powers. The rain, the wind, the heavenly bodies — all were viewed as living entities. Even some inanimate objects were thought to possess a spirit. The way in which the Fort Ancient and Shawnee peoples perceived their world, the structure of that world, and humans' place within it provided an important charter for how people were to live.

The Shawnee believed in one supreme being, called the Creator or Finisher. The Creator was considered the architect of the universe, who crafted the earth and all living things. The Creator had moral superintendence over the world, but day-to-day affairs of the Indians were watched over by two subordinate deities, "Our Grandmother" and "Our Grandmother's Grandson." It was the Grandson who was in charge of the welfare of the Shawnee. In addition to these three main deities, a host of lesser deities — Corn Woman, Squash Woman, the Thunderbirds, and Giant Horned Serpents — were also worshipped. Almost all living things, and many inanimate objects, were perceived as possessing spirits.

Prayers were offered to these various spirits both privately and publicly. Messages to the life forces were sped along their way with smoke from the sacred plant tobacco. A series of laws or rules guided daily behavior. These laws were given to the Shawnee by the Creator, and a breach of these was thought to bring bad luck and misfortune.

As agriculturalists, the Fort Ancient peoples were especially careful to honor their deities. Periodic community-wide festivals and rituals served to reinforce the teachings of the Creator and his subordinates, and to promote feelings of group solidarity. Just as there was an annual cycle of economic activities, so was there a regular calendar of feasts and fasts and other important ceremonies. A major planting ceremony in the spring, a first fruits ceremony celebrating the arrival of green corn in the summer, and a fall harvest festival were focal points of village life. Minor ceremonies were probably regularly held, however, throughout the course of the year.

Since the Fort Ancient peoples left no written records, the liturgy of their ceremonies is lost to us. Fortunately, sacred material objects have been found at many Fort Ancient sites. Bone rasps manufactured from both deer and bison ribs have been recovered from the Madisonville site (Figure 29); these served to produce a rhythmic buzz. Flutes made of the wing bones of small birds produced haunting melodies (Figure 29). Used in conjunction with wood and skin drums, these instruments probably provided a musical backdrop for chants and songs at festivals and solemn rituals.

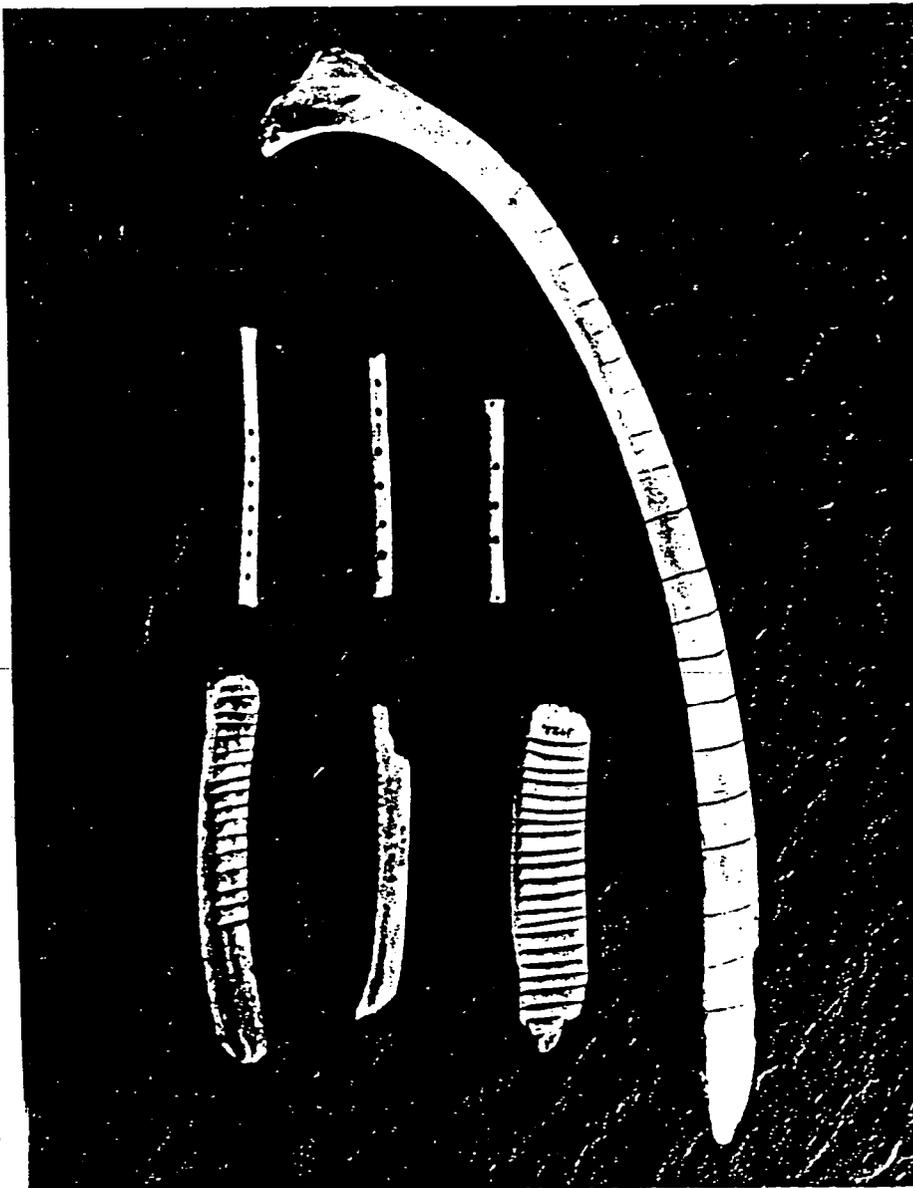


Figure 29
Bison and deer rib rasps and bird bone
flutes
Length of longest 48 cm
Madisonville site



000032

Tobacco was considered a sacred plant by many Native Americans. Recreational smoking of tobacco was uncommon. The Shawnee considered the smoke from that plant one of the best ways to send a message directly to the world powers. So strong was their belief in the sanctity of the tobacco plant that stone and clay pipes were thought to be animate objects.

The care and attention Fort Ancient artisans lavished upon their pipes tends to reinforce this information. Numerous effigy forms, most of which depict animals of one sort or another, have been found at Fort Ancient sites. These carvings probably are meant to portray totem species important to individuals or the clan. Owls, birds of all sorts, turtles (Figure 30), fish (Figure 31), and occasionally, humans (Figure 32) are depicted. The pipes fall into two categories: those that are small and may have been primarily meant for personal use, and those that are large and may have served a wider audience during village-wide ceremonies. An example of these so-called "great pipes" from the Turpin site represents a kneeling "prisoner" (Figures 32-33).



Figure 33



Figure 30

Figure 30

Siltstone snapping turtle effigy pipe
Madisonville site
Length 5.2 cm
Cincinnati Art Museum
Gift of Harry Zering

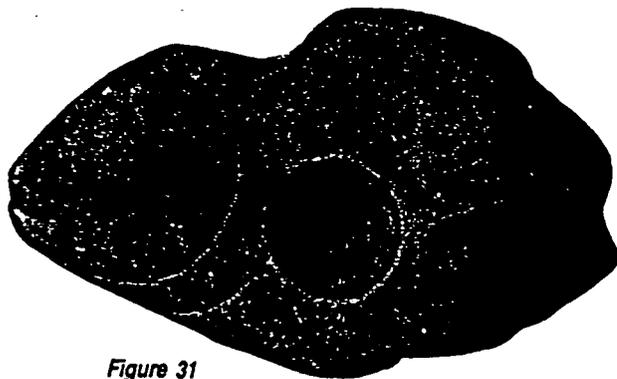


Figure 31

Figure 31

Limestone fish effigy pipe
Madisonville site
Length 7.8 cm
Peabody Museum of Archaeology and
Ethnology, Harvard University
08-3-10/71475

Figure 32-33

Sandstone kneeling prisoner pipe, probably
carved in Tennessee
Turpin site
Height 14.7 cm
Peabody Museum of Archaeology and
Ethnology, Harvard University
86-46-10-A3889

000033

THE END OF AN ERA

The European trade goods found at the Madisonville site suggest a strong connection between at least some of the Fort Ancient peoples and the historically known Shawnee Indians.

This association is most convincing for the Mariemont folk, the latest of the farming societies in the Tri-state. Extending this affiliation back further into the past is inadvisable. But whatever the case, by the time Europeans finally began settling the Ohio country in the 1790s the villages of the Fort Ancient peoples had been abandoned for over 100 years. What happened to these pre- and protohistoric farmers?

There is no one answer that serves to explain the demise of the Fort Ancient societies, and as archaeologists conduct more research, our level of understanding will increase. At the present time, however, it seems that both internal and external forces outside the control of the first farmers contributed to a breakdown of the old social order. These forces, though, were set in motion almost as soon as the commitment to dependence on corn agriculture was made.

We have already seen that an average Fort Ancient family of five or so people required as many as 70 bushels of corn per year. What happened if their fields did not produce enough food? Though the Indians could turn to increased use of wild plants and animals, village populations could not have been maintained for long. Was a decline in maize production responsible for the demise of the first farmers?

Throughout the 1500s and 1600s (and well into the nineteenth century) the climate of the Earth cooled by several degrees. This "Little Ice Age" may have affected corn production in the Ohio Valley. The Northern Flint corn was hardy enough to withstand overall cooler temperatures; however, the Little Ice Age might have generated more frequent late spring frosts that would have destroyed emerging plants.

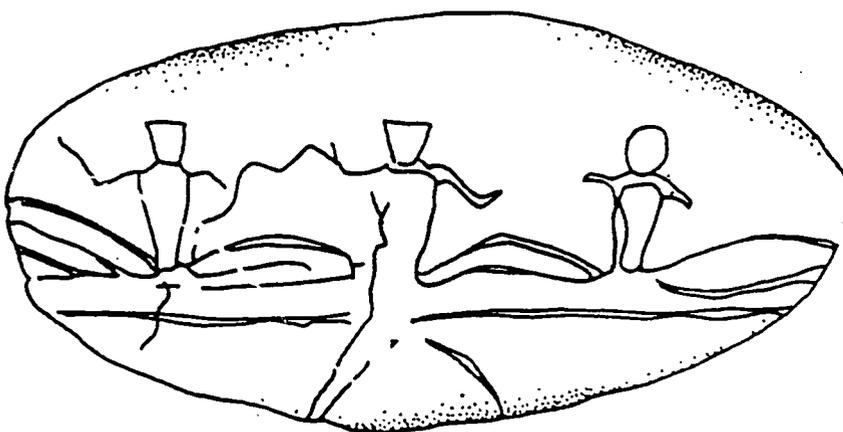
We do know that the cooler climate of the sixteenth and seventeenth centuries allowed grasslands to expand eastward into our portion of the Ohio Valley. Along with this expansion of grass came the American bison. Elk, an animal species that lives in park-like environments, also seems to have increased in abundance in the late prehistoric period. Tools made of the antlers of elk and the ribs and vertebrae of bison are common at the late Madisonville site; they have not been recovered from earlier sites.

European-introduced diseases may have also played a part in the decline of the late Fort Ancient villages. As early as the first quarter of the sixteenth century, the Spanish attempted to establish colonies on the coast of South Carolina. These

quickly failed, but not before introducing a host of new and dreadful diseases to the New World. Without any resistance to smallpox, measles, scarlet fever, and severe respiratory and digestive ailments, Native Americans were helpless. The diseases spread rapidly, outdistancing the Europeans themselves.

It is not improbable that diseases first introduced into the southeastern United States during the 1500s entered the Ohio Valley along already existing trade routes. Smallpox was especially devastating. Nearly everyone in a population who was exposed to the virus contracted the disease; 30 to 80 percent died. In some parts of the Madisonville site, group and mass burials were frequently encountered. Whether these individuals were victims of contagious disease is unknown, but the possibility is not unlikely.

Besides contagious disease, the Fort Ancient peoples may also have felt political pressure by Native Americans outside the Ohio Valley. The roots of this pressure lay in the insatiable appetite of Europeans for beaver pelts. Trade in furs between Indians in the Northeast and Europeans on the East Coast rapidly led to the destruction of beaver populations in New York and New England. As the demand for furs increased, the Iroquois Confederacy — a group of five tribes in upstate New York — gained early access to firearms and as a result came to dominate the trade networks linking the Great Lakes and Midwest with the East Coast. Beginning in the mid-seventeenth century, the Confederacy began making raids on Great Lakes and Ohio Valley Indians. By 1672, the Iroquois had managed to drive the Shawnee out of Ohio into Illinois, South Carolina, and Alabama. Not until the 1750s did the Shawnee return, and by this time European nations were laying claim to their former territory. Bloody raids and attacks went on for years. Finally, in 1795, at the Treaty of Greenville, the Shawnee, along with twelve allied Indian tribes, ceded most of their land in Ohio to the United States, and for all practical purposes, Native American life in the middle Ohio Valley came to an end.



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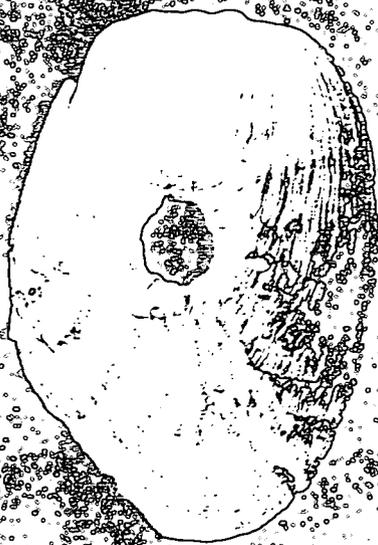
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