The Wever Bypass Excavations

Highway Archaeology Along the Great River Road in Southeast Iowa

The Wever Bypass Excavations: Highway Archaeology Along the Great River Road in Southeast Iowa

Between 1974 and 1994, the Iowa Department of Transportation sponsored a series of archaeological investigations along portions of US Highway 61 in southeast Iowa. The studies were conducted to learn whether proposed widening and realignment of the existing highway had potential to harm any of the region's important historic landmarks. Preliminary surveys conducted during the 1970s recorded hundreds of previously undocumented archaeological sites along US 61 between Keokuk and Dubuque, including several that were later determined historically significant. Two of these important sites were discovered along a proposed bypass near the Town of Wever in Lee County, Iowa. The Federal Highway Administration and the Iowa Department of Transportation studied design alternatives to avoid the sites, but ultimately determined this would not be feasible.

This finding led to a second round of archaeological investigations designed to salvage or recover the historical information contained in these important sites prior to road construction. Following consultation with the Iowa State Historic Preservation Office, the Federal Highway Administration and the Iowa Department of Transportation agreed to sponsor archaeological excavations at both sites beginning in 1992. Early discoveries confirmed the historic significance of the two sites, which were found to represent the remains of a large prehistoric village settled about 700 years ago by Siouan people believed to have been ancestors of the Ioway, Oto, Missouria and Ho-Chunk (Winnebago). The Wever Bypass excavations continued through 1993 and 1994 to become the largest archaeological excavation ever attempted in state history. This booklet presents the story of those excavations and its discoveries.

Aerial view of the Wever bypass excavations in 1992. The town of Wever is located at the right of the photograph.

All illustrations are from project files unless noted otherwise.

By Randall M. Withrow, The Louis Berger Group, Inc. 2012. Published by the Iowa Department of Transportation, Ames, Iowa

Valuable assistance for this project was provided by: Harry Budd, David Drake, Randy Faber and Libby Wielenga, Iowa Department of Transportation, Ames, Iowa; Maria Pearson, former Chairperson, Indian Advisory Committee to the Office of the State Archaeologist, Iowa City, Iowa; William Green, former State Archaeologist of Iowa, Iowa City, Iowa; and Kathy Gourley, Kira Kaufmann, and Doug Jones, State Historical Society of Iowa, Des Moines, Iowa. Design by Diane Stölen.

This booklet was sponsored by the Iowa Department of Transportation in cooperation with the Federal Highway Administration and the State Historical Society of Iowa.

The Wever Bypass

Highways are an indispensable part of our modern infrastructure and we have to put them somewhere, but what happens when plans for a new road could mean destroying a unique, important, and irreplaceable piece of our history? This booklet describes one instance where highway planners, Indian tribes, and historic preservationists in Iowa were faced with this dilemma and the process used to find a solution acceptable to all.

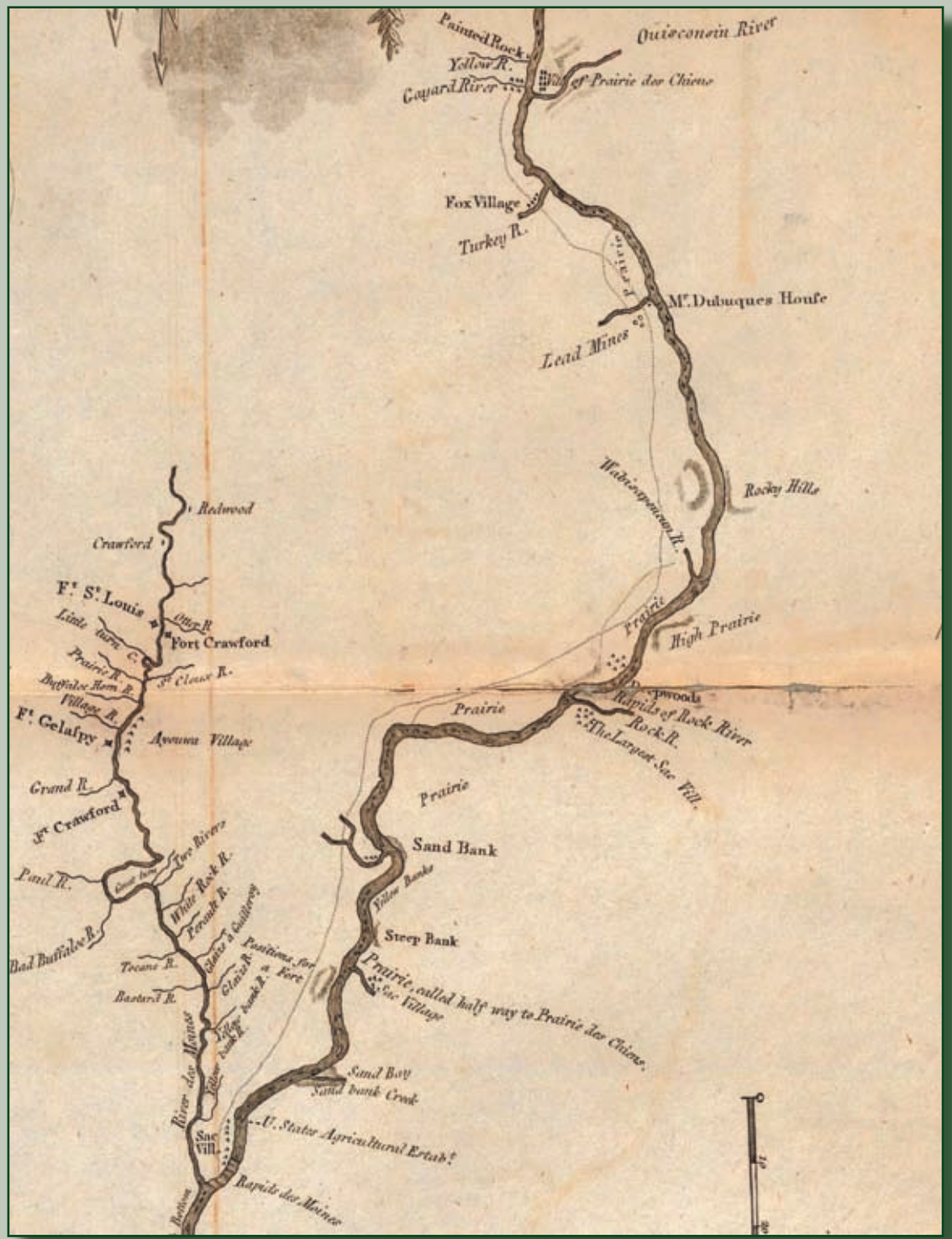
This is a story about a highway project near the small town of Wever, Iowa. Wever is a community of less than 500 people, located along the Mississippi River in southeast Iowa. The town was founded in 1870 at a point where the then new Chicago, Burlington, & Quincy Railroad, connecting the cities of Burlington and Fort Madison, came nearest the stagecoach route linking Burlington and Fort Madison. The railroad established a station point between the two travel routes with a town plat approximately six blocks long. The town itself was named after General Clark R. Wever, a popular brigade commander during the Civil War, who later became a prominent Fort Madison banker, and one imagines, an influential railroad investor. With its strategic location, the town of Wever quickly emerged as the principal town in Green Bay Township, but it was destined to remain small due to its proximity to the much larger cities of Fort Madison and Burlington. The former stagecoach route was eventually paved to become US Highway 61, a two-lane highway that passed through the middle of Wever. By the early 1970s, automobile and truck traffic on the highway had increased to the point where the Iowa Department of Transportation began to consider options for expanding vehicle capacity along the corridor. The option considered most beneficial to improving traffic flow between Fort Madison and Burlington included a proposal to relocate a 1.3-mile segment of the existing highway approximately 0.2 miles west of its existing location, effectively routing traffic around, rather than through, the town of Wever.

In accordance with federal and state laws governing public works projects, the Federal Highway Administration and the Iowa Department of Transportation initiated a series of studies designed to investigate the effects that the realignment might have on local communities, businesses, and landowners. The studies also included an assessment of the project's potential to impact sensitive environmental areas including important cultural and historic places.

Iowa's Great River Road is Rich With History

People traveling on US 61 between the cities of Fort Madison and Burlington will notice signs along the side of the road that display a green and white pilot's wheel. Familiar to many, these signs identify this stretch of highway as part of The Great River Road, one of America's Scenic Byways. Authorized by an act of Congress, this designation is reserved for highways considered to have outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities.

Iowa's portion of The Great River Road is indeed rich with history, and it is especially well known for its archaeological attractions. Places like Effigy Mounds National Monument near Marquette, the Mines of Spain National Historic Landmark near Dubuque, the Toolesboro Indian Mounds National Historic Landmark in Louisa County, and Old Fort Madison in Lee County are among the archaeological sites open to visitors. These sites, advertised as they are to attract visitors, are well known to those who travel The Great River Road, but hundreds more exist unmarked and often unrecognized beneath the farm fields, forests, and city streets that border this well-traveled highway.



Library of Congress, Geography and Map Division.

Anthony Nau s 1810 Map of the Mississippi River

US 61 Follows Historic Trail

Shortly after the United States purchased Louisiana from France in 1803, the US government dispatched several expeditions to explore different parts of the new territory. In August 1805, about the same time Meriwether Lewis and William Clark were approaching the Continental Divide on their journey to discover an overland route to the Pacific Ocean, the Territorial Governor of the new Louisiana Territory, General James Wilkinson, organized a second expedition to locate and map the source of the Mississippi River. This lesser known expedition was led by a young US Army Lieutenant named Zebulon Pike who left St. Louis on August 9, 1805 with a party of twenty three. Pike eventually traced the Mississippi River as far as Leech Lake, unknowingly falling short of his goal to reach the river's true source (Lake Itasca) by a distance of about 50 miles.

Upon his return to St. Louis in April 1806, Pike's notes and sketch maps were used by a government draftsman named Anthony Nau to create the first detailed map of the Upper Mississippi River valley. One of the interesting details featured on this map is a long overland trail that parallels the Mississippi River in what is now the state of Iowa.

It extends from the "Rapids Des Moines", a shallow crossing of the Mississippi River near Keokuk, north to a point opposite the mouth of the Wisconsin River at Prairie du Chien. Although absent from later versions of this map, Nau's original manuscript version, now preserved in the National Archives, identifies this trail as the "Road from the Rapids Des Moines to Prairie du Chien frequented by Traders *and Indi*ans". Today, the route of US Highway 61 between Keokuk and Burlington closely follows the path of this historic trail.

Portrait of Zebulon Pike.
(Public domain image.)

How were the Wever Sites Discovered?

Effigy Mounds National Monument. Photo by Randy Withrow.

Most archaeological sites are inconspicuous. Those selected as attractions, like Effigy Mounds National Monument, typically include surface features like mounded earthworks or borrow pits that are easy for visitors to recognize. At other sites, like Old Fort Madison, modern reconstructions are used to enhance subsurface features, like buried foundations, which would otherwise remain hidden from view. The vast majority of archaeological sites in Iowa are much less obvious to the casual observer, but many former settlements can be detected with surprisingly little effort…if one knows what to look for.

Certain items, like arrowheads, are widely recognized as prehistoric artifacts, and anyone who finds such an item in Iowa has probably discovered a prehistoric archaeological site. But arrowheads are just one of the many everyday items that might be preserved at one of these sites. In fact, the most common artifact found at prehistoric sites in Iowa is not the arrowhead, but the chip of stone removed by the stoneworker who created the arrowhead.

Literally hundreds of stone chips were produced for every finished arrowhead that was made, and it was not unusual for these items to become widely scattered across prehistoric campsites and living areas. For the archaeologist hoping to discover these long-forgotten settlements, these small chips of stone, usually made of a flint-like material called chert, often provide the first clue that a site has been found.

The Wever Bypass corridor was first examined by professional archaeologists during the mid-1970s. The first professional study, known as The Great River Road Survey, was sponsored by the Iowa Department of Transportation and was designed to gather baseline information about the presence of historic sites and other cultural and natural features along selected portions of the Byway.

Archaeologists spoke with hundreds of individuals who owned land along the existing highway. Many local residents already knew of places where arrowheads and other prehistoric artifacts could be found, and many shared this information with the survey team. The archaeologists then conducted field surveys themselves, exploring these reported find spots and searching the rest of the proposed highway corridor for evidence of unreported archaeological remains.

This preliminary survey was highly successful, recording more than 275 new archaeological sites in seven of the ten Iowa counties that border the Mississippi River. In Lee County alone, the archaeologists reported more than 50 new sites, most of them prehistoric.

In 1978, the Office of the State Archaeologist completed a more detailed survey focused specifically on the proposed bypass alignment at Wever. This survey located 22 more sites, including what appeared to be a large prehistoric settlement just outside of town. Hundreds of prehistoric artifacts were observed on the surface of plowed fields west of Wever. One of these surface scatters, now known as the Wever Site, was extremely large. The survey team estimated its size at between 8 to 10 acres.

No digging was done at this early stage of the investigation; instead, the survey team searched the ground surface for items that might help identify the age and cultural affiliation of the people who once lived there. Among the artifacts they discovered were several dozen pieces of broken pottery. On the edges of the sherds, they could see pieces of crushed clamshell that had been mixed with the clay used to make the pottery. Archaeologists know that people living in the upper Mississippi River valley first began making shell-tempered pottery about AD 1200. The manufacture of shell-tempered pottery was an important technological innovation borrowed from other cultural groups who lived in the St. Louis area.

Large storage jar recovered from the Wever Site.

Shell-tempered pottery. Note pieces of white mussel shell visible on the surface of the vessel.

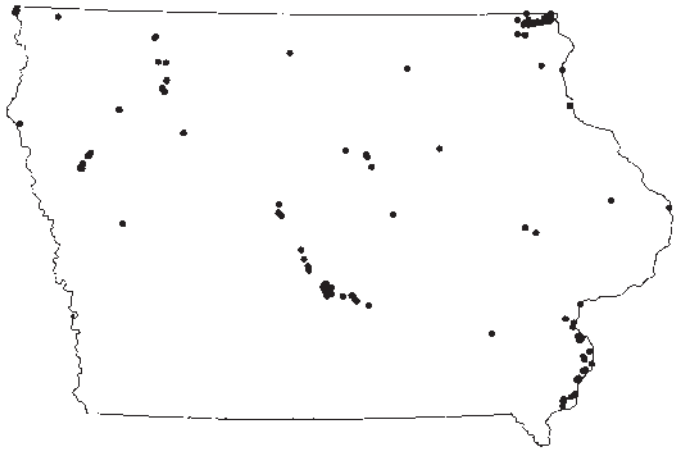
These early potters had discovered that tempering or mixing clay with mussel shell instead of sand or crushed rock yielded stronger pots with thinner walls. Not only were they more durable, pots made with shell-tempered clay were light weight and could withstand sustained heating and repeated use better than their rock-tempered counterparts. The discovery of this distinctive shell-tempered pottery on the surface of the Wever Site immediately told the archaeologists that they were standing at the site of a late prehistoric village associated with the Oneota culture, a group who lived throughout much of the Upper Midwest between AD 1250 and AD 1700.

Who were the Oneota?

Unusual bottle believed to be evidence of trade with related groups in the central Illinois river valley.

The term "Oneota" is used by archaeologists to refer to the archaeological remains left behind by what are probably many different, but culturally related, ethnic groups. Most archaeologists believe that Oneota sites once were occupied by Siouan language speakers, who were ancestors to the Ioway, Oto, Missouria, and Ho-Chunk (Winnebago). Historic accounts from the late 1600s and early 1700s indicate a close correspondence between the villages of these groups and the locations of known Oneota sites occupied at the time of first contact with Europeans. The ancestors of other Siouan groups, including the Kansa, Osage, Omaha-Ponca, and Mdewakanton Dakota, may have also left sites that archaeologists would identify as Oneota, and at least one group of Algonquian speakers, the Miami, has been linked to Oneota sites in the state of Illinois.

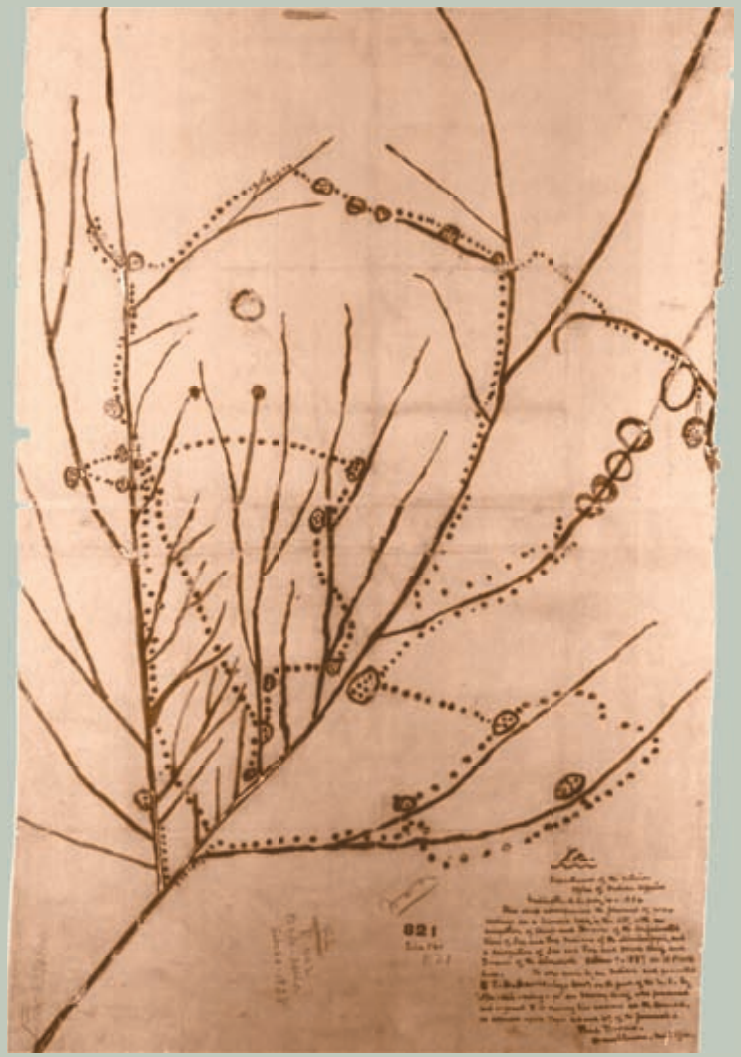
Oneota remains are found throughout a 10-state region from Nebraska to Indiana and from Missouri to Manitoba. In Iowa, Oneota sites are concentrated along major river valleys in four parts of the state: northeast Iowa, southeast Iowa, northwest Iowa, and the central Des Moines River valley. Some archaeologists have suggested that these regional concentrations could represent cultural territories with ethnic continuity over time, but no clear evidence for this has yet been established.



Location of known Oneota sites in Iowa. Map courtesy Stephen C. Lensink. From L. Alex 2000

Typical Oneota tools: knives, hide scrapers, drill, and arrowpoints. Photo by Diane Stölen.

Linking History and Archaeology



Record Group 75, National Archives and Records Administration. Washington, D.C.

Map presented by Ioway delegation to US Indian Commissioner, October 1837

The people who lived at the Wever Site seven hundred years ago did not refer to themselves as "Oneota". The term was first used by Charles R. Keyes, founder of the Iowa Archaeological Survey, to refer to artifacts discovered at a group of late prehistoric archaeological sites located along the Upper Iowa River in northeast Iowa, which at that time was known as the "Oneota River". Archaeologists continue to use the term to refer to archaeological sites found in the upper Midwest region that date between AD 1000 to AD 1650 and share a set of common material traits that include shell-tempered pottery, small triangular-shaped projectile points, bison scapula hoes, milling stones, and stone smoking pipes. The term Oneota is also used by archaeologists in a broad cultural and historical sense to refer to the people responsible for creating the archaeological sites where these materials are found, although the people who created these sites surely referred to themselves in other ways.

Oneota sites have been identified across a broad region that includes Iowa, Illinois, Kansas, Minnesota, Missouri, Nebraska, South Dakota, Wisconsin and southern Manitoba. As such, these sites almost certainly represent the ancestral homes of several different, but culturally related ethnic groups. Geographically, the distribution of Oneota sites corresponds most closely with the ancestral territories of the Ioway, Oto, Missouria, Ho-Chunk (Winnebago), Osage, Omaha, Kansa, Ponca, and Eastern Dakota tribes.

Archaeologists have long recognized the close geographic relationship between Oneota site locations in Iowa and the ancestral homeland of the Ioway Tribe. Written accounts from the late 17th century record the Ioway among those who greeted the first European explorers who ventured into the Upper Mississippi River valley. The Ioway invited French traders to their villages along the Upper Iowa River and archaeological evidence of those first encounters survives in the form of glass trade beads, iron knives, fragments of brass kettles and other French period trade items found at several sites in northeast Iowa and southeast Minnesota. The direct association of these European trade items with "Oneota" artifacts at a number of different locations establishes a strong historical link between the Ioway people and the "Oneota" culture as defined by archaeologists.

An 1837 map produced by an Ioway treaty delegation closely links the tribe to several areas known to have archaeological sites with Oneota artifacts including the Upper Iowa River valley, Spirit Lake, and the Little Sioux River valley. The map was used to defend the Ioway Tribe's land claims in treaty negotiations with the US government. The map, sometimes known as "No Heart's map" in reference to the Ioway leader Na'je Nine (translated No Heart of Fear) who spoke on behalf of the tribe, depicts 23 ancestral villages and travel routes extending from Green Bay, Wisconsin west into eastern Nebraska and south to the Missouri River.

Glass beads and brass kettle fragments from a late 17th-century Ioway village site in southeast Minnesota. Items include rolled or coiled sheet fragments used as ornaments. The perforated fragment (upper left) is a riveted handle lug from a brass trade kettle. Site 21HU26, photo by Diane Stölen.

The Oneota were excellent farmers who also hunted, fished, and gathered other wild foods. They lived in year-round villages as well as seasonal camps and practiced floodplain gardening. They grew a wide range of crops including corn or maize, beans, squash, bottle gourd, sunflower, tobacco, little barley, knotweed, and marsh elder. They hunted bison, deer, elk, bear, and smaller mammals, took mussels, turtles, and fish from local streams and rivers, and gathered a variety of wild plants including fruits, berries, nuts, and wild rice.

Different plant and animal resources were emphasized from region to region depending on the availability and abundance of local species. For example, bison certainly assumed a more important role for Oneota groups in Iowa who lived closer to prairie environments, while deer, fish and wild rice were more important to Oneota groups living in Wisconsin and Minnesota. Wherever they were, the Oneota were adept at making extensive and efficient use of the natural resources available to them.

As previously noted, shell-tempered pottery is one of the most distinctive artifacts found at Oneota sites. Large, round or globular-shaped jars with constricted openings and one or two sets of opposed handles are perhaps the most common vessel type, but plates, bowls, and bottles were also made by Oneota potters.

Other common artifacts found at Oneota sites include small triangular-shaped arrowpoints, stone hide scrapers used to clean and cure animal hides, drill points chipped from stone, stone tobacco pipes carved from red catlinite or pipestone, hammerstones, grinding stones used to mill grain, polished celts used for woodworking, paired sandstone abraders used to smooth or plane arrowshafts, hoes made from bison scapulae, bone awls and punches used to work animal hides, shell spoons, and cold-hammered copper implements such as awls, tube beads, and pendants.

Bone tools: fishhooks, needles, weaving tools, and awls.

Fragments of stone tobacco pipes. Long stems made from sumac or other wood were inserted into the open perforations at the end of each pipe.

Using Computers to Reconstruct Prehistoric Pottery

Pottery is an extremely important artifact for archaeologists interested in the study of prehistoric cultures. First of all, it preserves well. Not only is it made of relatively inert materials (clay and crushed rock), but when dried and heated, it hardens and becomes even more resistant to decay. Second, it is abundant. Earthen pots are fragile and easily broken. One pot can be broken into many pieces and, fortunately for archaeologists, these fragments are typically scattered about at prehistoric settlements thus making sites easier to find. Third, because it is a plastic medium, clay can be easily molded, shaped, and decorated. Since mistakes are easily fixed, we can reasonably assume that the finished object is a reliable representation of the maker's intent. Fourth, we know that prehistoric people in Iowa started making pottery about 800 BC and that many changes occurred in ceramic technology over the next two thousand years. With the aid of radiocarbon dating, archaeologists have gradually established a chronology for many of these changes that now provides a useful tool for estimating the age of sites where pottery is present. Where more than one type of pottery is found, these artifacts also help us to recognize sites that may have been used repeatedly by different cultural groups.

One of the disadvantages with fragile items is that they do break. Not surprisingly, archaeologists hoping to glean information from the study of prehistoric pottery are almost always confronted with small pieces of pots, jars, and bottles instead of whole vessels. Needless to say, knowing the number of vessels represented in a collection of sherds or fragments and the range of sizes and shapes present can provide important information about the types of daily activities that may have taken place at prehistoric sites as well as the relative importance of those activities and how this may have varied from site to site or from time to time.

The Wever research team used a computer program to help reconstruct three dimensional images of prehistoric pottery recovered from the Wever excavations. This innovative approach, developed by Archaeologist Dave Benn and Graphics Specialist Bill Isenberger, extrapolated the cross-section profile of a single vessel fragment around a 360-degree arc. The result was the representation of a complete vessel based on the size and form suggested by the original fragment.

A total of 379 ceramic vessels were identified among the 72,000 pottery fragments recovered during the Wever Site excavations. The results indicated the presence of a wide range of vessel types including hundreds of jars, about 60 bowls in both closed and open mouth forms, six plates, and one bottle.

A collapsed jar shown as it was found during excavations.

Computer reconstruction of a four-handled jar.

Early Site Explorations

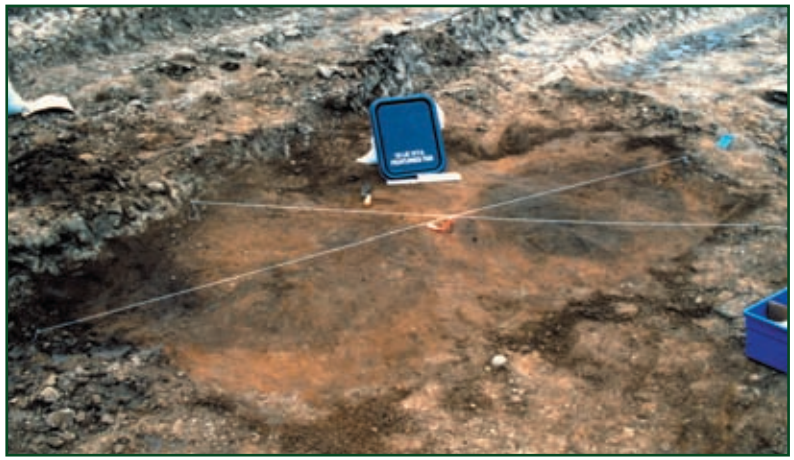
Archaeologists got their first close look at the Wever Site in the fall of 1984. By this time, highway planners had examined alternatives to the proposed bypass alignment and determined that more information was needed about the archaeological sites that would be affected. Precise locations and boundaries were needed for each site located within the highway corridor in order to calculate what percentage of each site would be affected. An assessment was also needed regarding the historical importance of each site.

In order to create an accurate map of the Wever Site and the distribution of artifacts within the site, the archaeologists established a checkerboard-like grid across the proposed highway corridor. Each grid block measured 100 square meters in size or roughly 30 feet by 30 feet square. Artifacts lying on the ground surface within each grid block were collected and tabulated to map differences in artifact type and quantities from one grid block to the next, all across the site. In places where vegetation was too thick to see artifacts lying on the ground surface, the archaeologists instead dug small test holes at the corners of each grid square using 6-inch diameter posthole diggers. The soil from each hole was sifted through wire mesh (1/4-inch diameter) to collect any artifacts that might be present, and the items recovered from each test hole were then tabulated in the same manner as the surface items. It took excavation of 175 test holes to fully establish the limits of the Wever Site, but the effort was successful. An added benefit to this type of systematic testing was that the results could also be used to help narrow the search for possible house locations or other prehistoric activity areas within the settlement, places that might be worthy of further testing or excavation. For instance, areas with greater quantities of burned stone might indicate places where campfires were made to cook food, while places with relatively large quantities of stone chips might point to areas used to make stone tools, and so on.

Deeply buried artifacts, some as much as five feet below the surface, were discovered in some test holes indicating the presence of prehistoric storage pits dug deep into the ground. In an effort to test this possibility and further evaluate the overall research potential or importance of the site deposits, the team of archaeologists excavated a large test unit at four of these locations. Each test unit measured about six feet long and three feet wide.

Just below the topsoil in each unit, the excavators encountered evidence of prehistoric pits, four in all. Three of the pits were large, measuring more than three feet across at the top and four to five feet deep. The fourth was about half the size of the others. The excavators divided each pit in half and excavated one half of each pit all the way to its bottom. The result was a cross-section that allowed the excavators to inspect each pit's overall shape and contents. All four pits contained pieces of Oneota pottery along with stone tools, chipping debris, and animal bones. The largest pit was bell shaped in cross-section—narrow at top and wider at the bottom—a shape typical of the storage pits used by many different late prehistoric farming cultures throughout the upper Midwest. At the bottom of this pit, excavators encountered a concentration of stone chips--12,735 pieces in all—found just as they were left by the Oneota stoneworker who dumped them into the pit some 700 years earlier.

Cross-section view of a deep storage pit. Note the straight walls and base of the pit and the exposed refuse materials.



The circular outlines of two dark-colored storage pits are being mapped. The strings are used as reference lines to help measure the shape and size of the stains. The location of the center pin is recorded using survey equipment.

Prehistoric Root Cellars

The Wever Site excavations uncovered more than 150 deep storage pits with a distinctive bell-shaped outline. Pits of this type have been well documented among Plains cultures as winter storage facilities or "cache" pits. One of the most detailed descriptions of how these pits were made and used was provided by a Hidatsa woman named Maxi'diwiac, also known as Buffalo Bird Woman, who was interviewed by anthropologist Gilbert Wilson in 1913. These pits were much more than just open holes; in fact, they were carefully constructed to control moisture that might cause contamination and spoilage. Great care was also taken to seal the opening to protect it from accidental collapse and to conceal its location from would-be intruders. According to Buffalo Bird Woman, cache pits were dug and filled by women. Pits were usually located outside lodges where they were less likely to attract mice and were often used and reused for several years. Large pits were dug by hand with the help of tools like bone or stone hoes or antler picks. Dirt was loaded into bowls or hides and carried away, perhaps to refill an older pit that had outlived its usefulness.

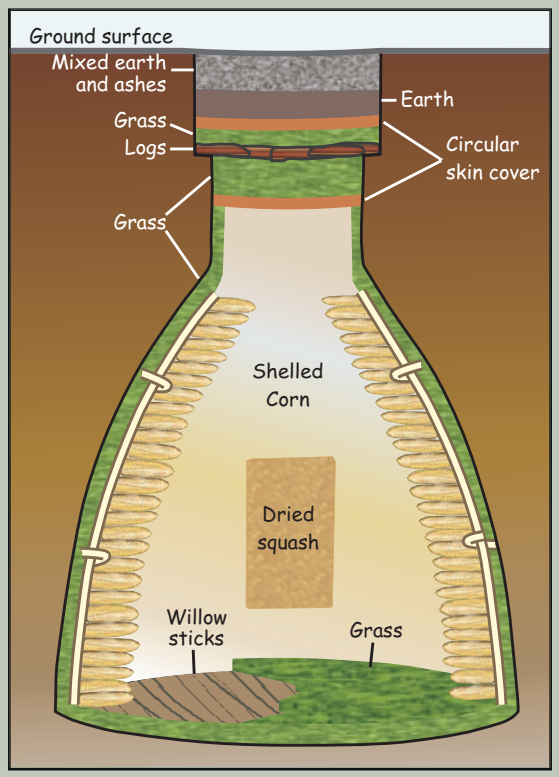


Diagram of an Hidatsa storage pit. Based on descriptions provided by Buffalo Bird Woman.

The pits were almost always less than three feet in diameter at the mouth. The smaller pits were dug to about eye level for the woman digging the hole, while deeper pits might require a ladder and several days to dig. The bottom of the pit was lined with a layer of dry willow sticks and covered with several inches of dried grass. Dry grass was also used to line the walls of the pit where it was held in place with a framework of willow sticks placed vertically against the wall and pinned to it with smaller sticks. A hide lining was placed over the grass lining and the pit was then filled with food. Dried corn was stored in strings of braided ears which were arranged in rows or layers against the pit walls. Shelled or loose corn would then be poured into the center cavity. Food that spoiled easily, like dried squash, was sometimes placed in the middle of the shelled corn as the pit was filled in order to keep it away from the walls of the pit and thus provide it with maximum protection from excess moisture. Other types of food, such as dried fruit, dried meat wrapped in hides (parfleche containers), bone grease stored in animal bladders, and even non-food belongings, might also be stored in pits for later use.

Once everything was in place, the pit contents were capped with a cured animal hide, a layer of dry grass, and a layer of logs set over the opening about a foot or so beneath ground level. Tightly packed grass, a second hide cover, and a layer of earth, about a foot thick or so, was added to seal the pit and its contents until needed. Sometimes ashes and refuse were used with the earth fill to help disguise the location of the pit and thus protect it from theft.

Remains of decayed grasses used to line the inside of a large storage pit.

An archaeologist prepares to map the cross-section of a large bell-shaped storage pit. Approximately 30 inches of topsoil were removed prior to the excavation of this deep pit.

Why Did the Iowa Department of Transportation Decide to Excavate the Wever Site?

Iowa Department of Transportation Director of Project Planning Harry Budd and Indian Advisory Council Chairperson Maria Pearson (1932-2002) at the Wever Site in 1992.

Archaeologists have many questions about the Oneota presence in southeast Iowa. As mentioned above, we know that southeast Iowa was important to the Oneota. It was one of just four places in Iowa where Oneota people are known to have settled in large numbers. Prehistoric settlements, some of them very large like the one at Wever, were once found on the blufftops and broad river terraces overlooking the Mississippi River from Muscatine to Keokuk, and as far south as Quincy, Illinois, more than 130 miles south of Muscatine.

We also know that the Oneota maintained a dominant presence in the region for more than two centuries, beginning as early as AD 1300 and continuing well into the 16th century AD. As such, the Oneota certainly figured prominently in the history of the Mississippi River valley, and given their strong territorial connection to this region, it is difficult to imagine establishing a history of prehistoric cultures in the Mississippi valley without collecting more information about this important society. The test excavations completed at the Wever Site in 1985 left little doubt that it was an important Oneota settlement. Adding further interest was the recognition that certain artifacts collected from the Wever Site indicated that this particular settlement may have been one of the first Oneota villages located in this broad region. Archaeologists recognized that the designs depicted on some of the pottery fragments collected from Wever were very similar to those found at early 13th century Oneota sites located in the central Des Moines River valley. This not only suggested that Oneota people moved to southeast Iowa from settlements on the Des Moines River, but that the Wever Site might have been one of their first villages in the region.

Based on these discoveries, officials from the Federal Highway Administration and the Iowa Department of Transportation consulted with archaeologists at the Iowa State Historic Preservation Office and concluded that the Wever Site was a significant archaeological site, important enough for listing in the National Register of Historic Places. On May 2, 1986, the National Park Service agreed with this recommendation.

Elaborate geometric designs were applied to many Oneota vessels. Archaeologists believe that shared motifs found on pottery from different sites may indicate close relationships between potters or evidence of trade. The design elements that appear on the pages of this booklet were found on pottery vessels from the Wever Site.

How Was The Site Excavated?

Archaeologists examine the freshly graded surface of the Wever Site for artifacts and possible storage pits.

As a federal agency, the Federal Highway Administration was now required by law, specifically the National Historic Preservation Act and the Department of Transportation Act, to consider ways to avoid impacting the site. No feasible alternative could be found to avoid the site through redesign of the bypass; the site was simply too large and centrally located along the proposed alignment. Faced with the prospect of not building the badly needed bypass, the three consulting parties agreed to a plan that would allow the road construction project to proceed as planned. The Iowa Department of Transportation would be allowed to build the new bypass, but only after the affected portion of the Wever Site had been excavated by professional archaeologists. The intent would be to recover any important scientific and historic information contained within the site by carefully documenting the content of the archaeological deposits present. What no one realized at the time was that they had just agreed to initiate what would eventually become the largest archaeological excavation in state history.

The archaeological excavations at the Wever Site were initiated in 1992 with an expectation that archaeologists would encounter the remains of a large Oneota village. Excavators assumed that they would find traces of Oneota houses, perhaps several hundred storage pits, and several thousand artifacts including stone tools, pottery, animal bone and other remains typically found at Oneota sites.

Because such a large portion of the site was being affected by the road project, archaeologists were also optimistic that they would have an opportunity to uncover most of the original settlement at Wever, something considered critical for understanding what Oneota villages were like, but rarely achieved due to the immense size of many Oneota settlements. Individual Oneota houses had been identified at a handful of other sites, but archaeologists could only guess at what the overall layout of a large Oneota village itself might have been like.

Since most of the site had been plowed for generations, archaeologists knew that they must first remove this layer of disturbed topsoil in order to uncover any intact remains of the village. To prepare for this, soil scientists were first brought to the site to gather baseline information about the nature of the soils in the area. Using this information as a guide, the archaeologists then brought in several pieces of heavy machinery to begin the task of removing about 12 inches of disturbed topsoil from a three-acre segment of the proposed highway corridor. Scrapers were used for this work, and small mountains of backdirt were created off site as the work progressed.

No trace of the original living floor that the archaeologists hoped to find materialized as the final remnants of topsoil was removed from the site. No campfires or wall posts from Oneota houses could be seen. Modern farming, which had brought so many artifacts to the surface and enabled archaeologists to easily locate the site, had also apparently churned up all near-surface evidence of the Oneota houses that once stood at this location. Any hope to locate these former structures and reconstruct the village plan would now have to rely on careful study of the distribution of materials that were buried below plow depth, specifically deep pits like those found by the 1985 survey team. A series of small test squares were excavated to obtain a comparative sample of the materials preserved just below the topsoil, but elsewhere backhoes were now brought in to begin the search for storage pits.

A backhoe is used to expose buried storage pits. Individual pits are marked with pin flags while other archaeologists map and probe potential pits to determine their depth.

Several large storage pits along the west right-of-way are excavated in 1994.

Another 12 inches of soil would need to be removed before excavators would begin to see the shadowy outlines of Oneota pits. Prehistoric pits often appear as dark stains against lighter colored subsoil. This is due in most cases to the pits having been backfilled with darker colored soil, like topsoil, that has a higher organic content than the surrounding subsoil. As backhoe work continued, the excavators began to uncover clusters of circular pit outlines, first in the southern portion of the site where deep pits had been discovered in 1985, then west, spreading some 200 feet across the entire width of the proposed right-of-way, and then north, spreading another 400 feet along the centerline for the new roadway. By December 1992, excavators had uncovered and mapped a total of 781 prehistoric pits, or "features" as archaeologists call them. Two hundred of these were at least partially excavated in 1992, but almost 75 percent had only been located and mapped. Based on the amount of area within the right-of-way that had yet to be searched, the archaeologists estimated that the final tally of prehistoric features within the roadway could approach 1,200 to 1,600.

No one involved with the project up to this point had imagined that the site would include such a rich inventory. In response, representatives from the Federal Highway Administration and Iowa Department of Transportation held a series of new meetings with the Iowa State Historic Preservation Office, the Advisory Council on Historic Preservation, the Office of the State Archaeologist, and the Indian Advisory Committee to consider how much additional archaeological work would be needed. The new work plan called for the identification of all remaining features located within the proposed right-of-way and excavation of an additional 200 pit features (400 total). The remaining pits, some 800 to 1,200 in all, would be sampled or "salvaged", but not fully excavated. The archaeologists would decide which pits to excavate and which to sample, but the intent would be to excavate a representative sample of pits from across the entire site.

Archaeologists excavate and map a concentration of storage pits.

Discarded tobacco pipe fragments carved from red pipestone.

Weaving tools and arrowpoints made of animal bone. The arrowpoints are made from the toe bones of white-tailed deer.

Field excavations continued through the summer of 1993 and 1994. The archaeologists worked diligently with backhoes and hand tools through the rain-filled spring and summer of 1993 and again during the summer of 1994. By the close of the excavations in September 1994, archaeologists had exposed 1,792 prehistoric features at the Wever Site and excavated or sampled 1,659 of them (92%). The site excavations produced an astounding total of 191,494 artifacts including: 9,606 stone tools like arrowheads, hidescrapers, drills, and knives; 108,812 pieces of chipping debris, the material produced as by-products of stone tool manufacture; 71,303 pieces of broken prehistoric pottery representing more than 370 different vessels; 1,023 ground stone tools such as hammerstones, milling or grinding stones, axes, smoking pipes, and celts; 256 bone tools such as awls, hoes, antler picks, needles, beads, bracelets, deer jaw sickles, antler tine arrowpoints, fishhooks, billets, and handles; and a variety of miscellaneous items made from ironstone, lead ore, pieces of shale, and cold-hammered native copper.

In addition to this massive collection of artifacts, the excavations also yielded more than 69,000 fragments of animal bone (more than 185 pounds) and a large quantity of 700 year old plant remains gleaned from more than 213 cubic feet of carefully sampled pit fill. This impressive collection, the largest ever recovered from a single Oneota site in the state of Iowa, now resides at the Office of the State Archaeologist at the University of Iowa in Iowa City where it is available for exhibit and continued study by archaeologists and other students of Oneota culture.

Small-Object Recovery

Sometimes the most important archaeological discoveries are the tiniest. For instance, seeds can tell us a great deal about what plants prehistoric people used, what the local environment may have been like in the past, and even what time of year people lived at the site. The presence of wild strawberry seeds for instance would only have been available during the spring, while the presence of nutshell might indicate a fall-season occupation. But how do archaeologists go about collecting such tiny objects?

One of the simplest and most effective techniques used to recover small objects from archaeological sites is known as "flotation". The archaeologist collects soil samples from areas suspected of containing small objects like plant remains or tiny animal bones. The samples are dried and then immersed in water. Objects lighter than water, such as charcoal and other plant remains, float to the surface where they can be poured onto a fine screen or porous fabric. This residue, which archaeologists usually refer to as the "light fraction", contains wood charcoal, charred seeds, nutshell, roots, and so on. Heavier objects like stone and animal bone sink to the bottom. This "heavy fraction" is also important because it typically includes a wide variety of items that would otherwise be overlooked during conventional hand excavations. Tiny artifacts like glass trade beads for instance would easily go unnoticed if excavators used only hand screens. And extremely fragile items, many of which can be very useful in describing local environments and subsistence activities, like the bones of fish, mice, and frogs, fish scales, and the shells of land snails, would either go unnoticed or be badly damaged if screened by hand.

Dark pieces of charred wood, nutshell, and maize kernels float to the surface and are caught in a fine-mesh sieve. Specimens are dried and then examined by specialists who identify the fragments according to species. Photo by Randy Withrow.

An archaeologist pours soil into a "flotation" machine to recover small objects from pit fill. Objects freed from the soil are collected into cloth bags and hung on a clothesline to dry.

The Oneota Village at Wever

Cut-away view of the post hole that once held the center support for the circular house or arbor at Wever. Limestone slabs were placed in the hole around the post to stabilize it and make it plumb.

The Wever Site excavations uncovered hundreds of underground pits. Most were shaped like straight-sided cylinders and averaged about four feet wide and four feet deep. Others were shaped more like basins, with openings that measured greater than their depth. Documenting the size and shape of each pit was important because the dimensions of each pit provides clues about its original purpose. Basin-shaped pits, for instance, are often associated with food processing activities like parching, smoking, roasting, or cooking different types of food. Deeper straight-sided pits on the other hand were better suited for underground storage, much like root cellars. Aside from its shape, one might assume that the contents of a pit would also provide a clear indication of its use. This is true in some cases, but generally speaking, the contents of a pit are likely to reflect its final use, not necessarily its original purpose. This is because prehistoric pits, like other artifacts, often have a complex life history, and sometimes they are put to different uses over time. For instance, a deep pit designed to store food, once emptied, might become a convenient receptacle for household refuse.

Knowing the location and spatial arrangements of different pit types and the activities they represent helps the archaeologist reconstruct the overall layout or organization of work areas within the community. Knowing the location of other non-pit features, like fire hearths or the remains of posts used as structural supports for houses, and even areas of empty space, also helps. Working with these as reference points, and guided by the results of other Oneota site excavations where pits and houses have been discovered, it was possible to pinpoint the remains of at least two Oneota structures at Wever.

One was a large circular building, or perhaps an arbor, measuring about 60 feet in diameter. A nine-inch diameter post, planted four feet underground and blocked with limestone slabs, formed the sturdy middle support. Structures like this have been associated with ceremonial or religious activities among some Plains cultures. The association of a large open area resembling a village plaza or open community space surrounding the structure would seem to support this interpretation.

A dense concentration of pits surrounded the plaza on the north, west, and south sides. Somewhere in this confusing cluster of pits, archaeologists believe stood several Oneota houses. Unfortunately only one house could be located with confidence.

About 30 feet northwest of the circular structure at the north end of the plaza, archaeologists found the remains of a single longhouse-like building. It was oriented on a northwest/southeast angle, and although the ends of the building were not well preserved, it was clear that the building measured about 25 feet across and was at least 115 feet long. There were just a few pits inside the house, but many pits were found tightly clustered along the outside walls.

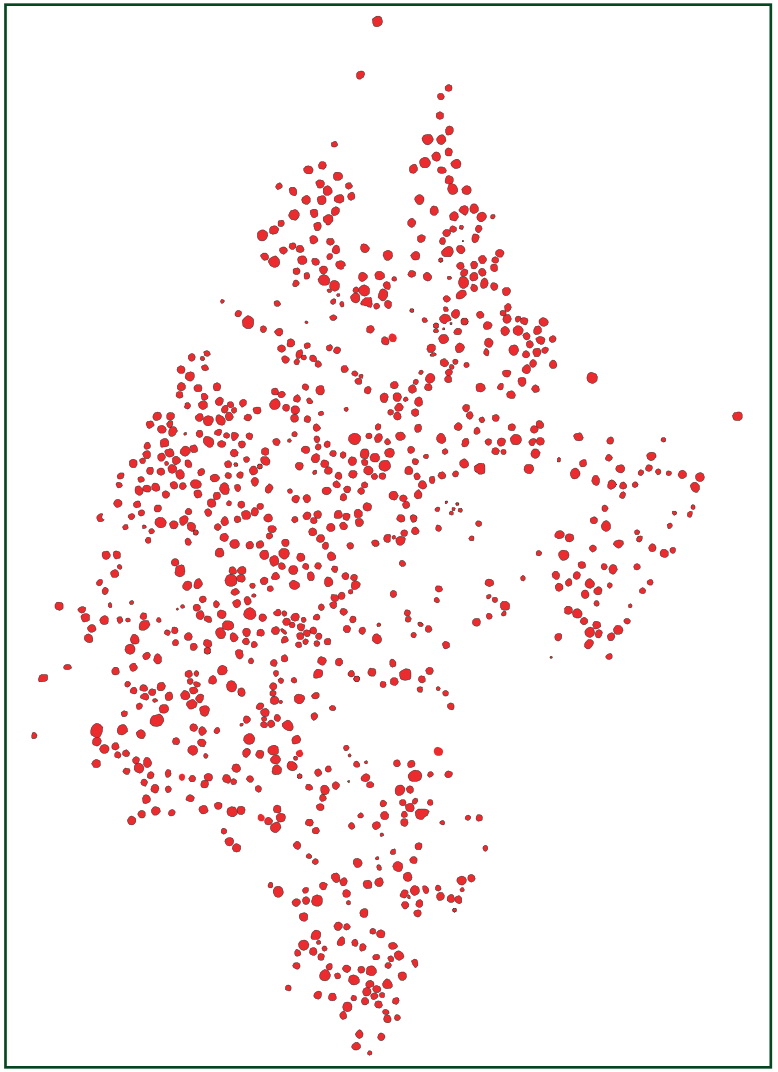
Traces of several support posts were found along the centerline of the structure along with at least one centrally located fire hearth. Other hearths were no doubt present within the building at one time, but unfortunately all traces of them had been removed by years of plowing. Based on comparison with different ethnographic accounts, archaeologists estimate that a building of this size may have housed about 50 people.

Similar longhouse-like structures have been found at Oneota sites in northeast Iowa, southwest Wisconsin, and northern Missouri, but the house at Wever represents one of the earliest of its kind found thus far, and it is the first house of its kind discovered in southeast Iowa. Unfortunately, we cannot say how many others like it may have existed at Wever, but based on recent discoveries in southwest Wisconsin, three or four others would not be considered unusual for a settlement this size.

Ioway family posing with horses in front of bark-covered lodge, Oklahoma, 1890. Photo by J. J. Hargrave. Courtesy of Denver Public Library, Western History Collection, Call Number X-30975.

The large number of storage pits present at the site certainly suggests the presence of more than just one longhouse at the site.

Finding an Oneota house at Wever was a very important discovery, and the fact that it was a longhouse type structure raises a number of interesting questions about the nature of Oneota society and how it may have changed over time. Longhouses like the one at Wever are typically found among cultures like the Iroquois that trace descent and family relationships through the mother's lineage rather than the father's. One of the reasons this is so interesting is because we know that when they first encountered Europeans during the late 1600s, groups like the Ioway measured kinship through the father's lineage. When this dramatic shift in social organization occurred, and why, still remains uncertain, but the archaeological evidence suggests that this may have been a fairly recent development in some Plains cultures like the Ioway.



Site map of the Wever Village showing concentration and linear arrangements of storage pits and other features. The open space in the right half of the map is believed to have been used as a communal area or village plaza. Several longhouses were probably arranged around the plaza. The line of storage pits located in the upper left hand corner of the map marks the south side of one of these longhouse structures.

Farmers and Hunters

Refuse pit contents: bison scapula hoes and broken pottery jars.

Deer skull with antlers still intact indicates occupation during the Fall/Winter season.

Evidence collected from the site shows that this was an important Oneota settlement and was probably home to at least 150 to 200 people. Radiocarbon dates were obtained on 23 samples of burned wood and other plant materials collected from throughout the site. Almost all of them (18 of 23) point to an intense occupation about 700 years ago (AD 1300). The fact that very few of the almost 1800 pits discovered at the site overlap with one another indicates that the people who dug the pits could easily tell where older pits had been and thus avoided them. This suggests that the site was probably not used for more than a generation or two. Several more recent dates, obtained from pits at the south end of the village, suggest that some Oneota people returned to the area around AD1400, but if so, then it was certainly a much smaller settlement than its predecessor. Animal bones and plant remains collected from refuse pits provide us with information about diet, food preferences, and daily activities. They can also tell us a great deal about what the natural environment was like near the settlement and whether or not people lived at the site on a seasonal or year-round basis. The remains from Wever tell us that it was a planting village, probably occupied year-round, but especially during the spring and summer months.

The Oneota were accomplished farmers, and archaeologists assume that the Oneota planted on the extensive Mississippi River bottomlands found just a few hundred yards east of the village. Maize or corn was unquestionably their most important crop. The carbonized remains of maize kernels and cob fragments were found in 80 percent of the soil

Bison scapula modified for use as a garden hoe. Inset drawing courtesy of Mary Slattery. From L. Alex 2000.

samples collected from the site. Examples of 8-row, 10-row, and 12-row maize varieties were present. In addition to maize, the Wever Oneota cultivated beans, squash, sunflower, tobacco, little barley, marsh elder, goosefoot, and knotweed. A wide variety of wild plants were also used. Hazelnut was found in surprisingly large amounts along with lesser quantities of acorn and hickory nut. The Oneota also collected blackberry, raspberry, grape, plum, cherry, strawberry, hawthorn pomes, smooth sumac, common elder, and wild rice.

The Oneota were also excellent hunters. Refuse pits contained large quantities of animal bone including large and small mammals, fish, reptiles, birds, and mussels. The largest quantities of meat were obtained from species like bison, white-tailed deer, and elk, but fish species like catfish, sucker, gar, sunfish, and drum were also important sources of food for the people at Wever. Woodland and riverine species of all kinds are present in lesser amounts including:

Refuse pit filled with mussel shell.


Archaeologist exposes part of a large jar fragment.

mammals like raccoon, beaver, muskrat, fox, bobcat, woodchuck, squirrel, rabbit, dog, coyote, and wolf; birds like duck, turkey, grouse, sandhill crane, and hawk; many species of turtle; and 34 different species of freshwater mussel. We know that some of these species would have been available for harvest year-round, but others, like wild strawberry and hazelnut ripen at a specific time of year. It is reasonable to conclude that people were indeed living at the site during these seasons. The variety of wild and cultivated plant species found at the site provides abundant evidence that people were present at the village throughout the growing season and well into fall when foods such as hazelnut, butternut and walnut would have been available.

Specific evidence for winter occupation is less abundant, but is represented by the presence of certain deer remains (aged teeth and skull fragments with attached antler) that indicate animals were killed during the winter months, and the bones of snowy owl known only to frequent this part of the Midwest during winter.

How does Radiocarbon Dating Work?

Modern science offers archaeologists many different options for determining the age of the archaeological remains they study, but radiocarbon dating, or "Carbon 14" dating as it is sometimes called, continues to be the most common method used by Midwest archaeologists. The reasons are simple: the cost is relatively inexpensive, about $300 per sample; the results are accurate, especially with recent refinements of the process; and most importantly, the material needed to obtain a date—wood charcoal or any other form of organic matter--is usually present at most archaeological sites.

Radiocarbon dating works by measuring the amount of radioactive carbon present in once-living organisms. The radioactive form of carbon, known as carbon-14, is produced naturally in the upper atmosphere as cosmic radiation in the form of neutrons collides with nitrogen atoms. The collision changes the nitrogen atom to carbon, albeit an unstable form of carbon. This unstable form of carbon (carbon-14) is absorbed by plants as part of photosynthesis along with the stable form of carbon (carbon-12), and the relative proportion of each variation, or isotope, within the plant will match the proportion present in the atmosphere as long as the plant lives and continues to take in new carbon. Likewise, anything that eats the plant, including animals and people, will contain the same proportions of carbon isotopes. When an organism dies and ceases taking in new carbon, the ratio of carbon-14 to carbon-12 within it begins to change at a known rate as the radioactive form (carbon-14) decays and changes back into nitrogen. This rate, known as its "half life", can thus be used along with a measurement of an organism's present carbon ratio to calculate the amount of time that has passed since the organism has died.

There are of course many variables to consider in making the final age calculation. Most importantly, we know that the amount of carbon-14 in the atmosphere has not always been constant due to fluctuations in the amount of cosmic radiation that reaches the earth. To compensate for this, scientists have developed a variety of correction factors established by obtaining dates on materials where the actual age of the specimen is already known; for example, wood obtained from the annual growth rings of trees has been used to calibrate radiocarbon results as old as10,000 years

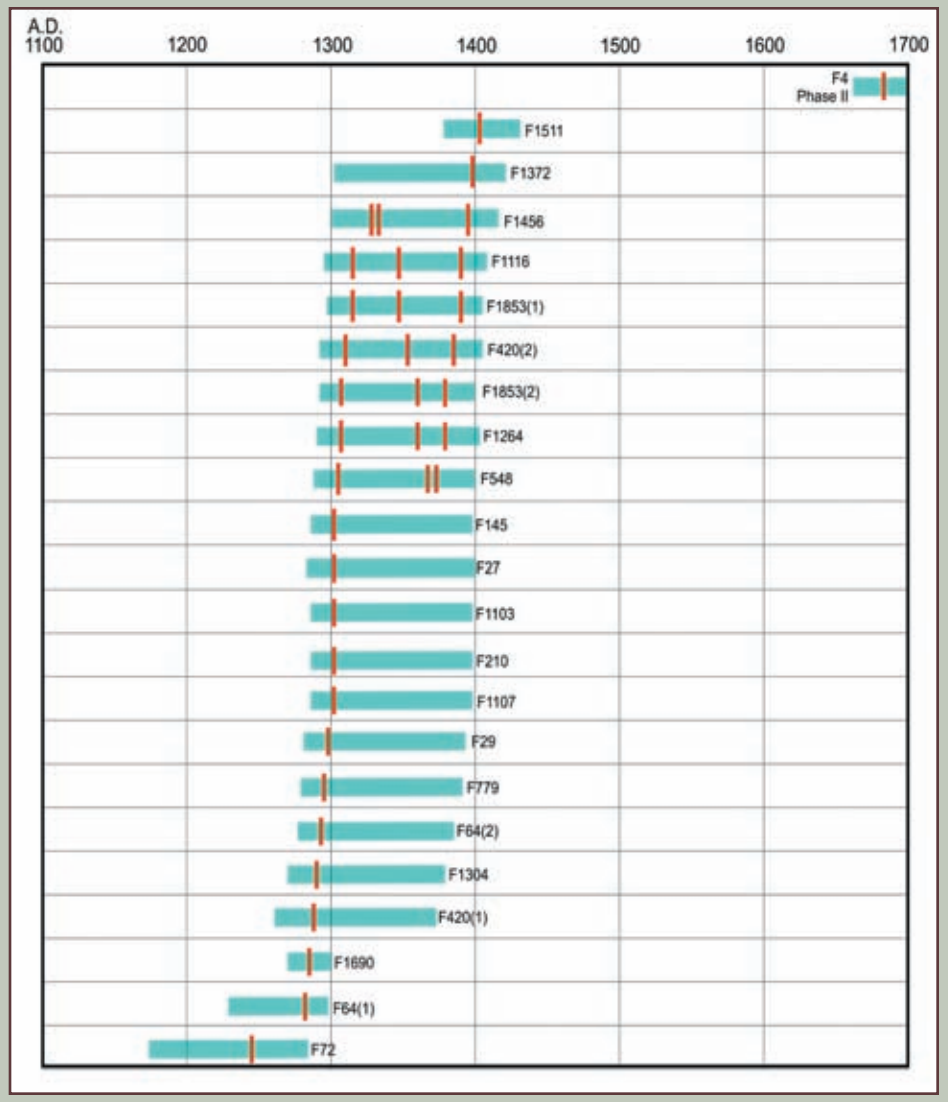


Chart showing the age estimates of carbon samples recovered from the Wever Site.

Why Did the Oneota Settle at Wever?

The village at Wever appears to have been established about AD 1300 by a group of Oneota families who moved to southeast Iowa from older villages located in the central Des Moines River valley. But what led them to Wever? We can probably rule out the possibilities of environmental disaster, disease, or external conflict, because we know that some Oneota groups remained in the Des Moines River valley for at least another 100 to 150 years after AD 1300. Political conflict within Oneota society also seems unlikely because we find evidence of continued interaction between the Oneota groups living in both of these regions. For instance, raw materials found in southeast Iowa, like stone used for making tools, continues to show up at Oneota sites in the Des Moines River valley long after Wever is established, and pottery from both regions continues to be made and decorated in very similar ways over time, indicating continued interaction and sharing of ideas. Eventually, sometime after AD 1400, it appears that all of the Des Moines River Oneota abandoned their villages and probably joined their relatives in southeast Iowa.

So we need to look for other factors to account for the move to southeast Iowa. One of the most important factors was undoubtedly the rich Mississippi Valley floodplain. We know, for instance, that close proximity to fertile soil suitable for maize agriculture was important to the Oneota, as was access to diverse floodplain and riverine forest resources and rich animal habitat. The extensive Mississippi River floodplain in southeast Iowa offered all of these in abundance. Another important factor was probably the natural abundance and local availability of a very high quality source of raw material for making stone tools, namely white chert. The limestone bedrock in southeast Iowa contains large quantities of chert (a type of flint). Known as "Burlington chert", this particular stone is easy to work and could be acquired in large amounts. It was unquestionably a prized raw material throughout much of prehistory and was certainly used and traded extensively by Oneota groups in the Mississippi River valley, including the Oneota people who lived at Wever. In fact, more than 95 percent of the 118,000 chipped stone artifacts recovered from the Wever site were made of this singular material. Establishing proximity to the mouth of the Skunk River was also probably a strategic factor that led Oneota groups to settle at Wever. Not only did the river's deeply incised valley provide ready access to abundant outcroppings of Burlington chert, the Skunk River is also one of the primary drainage systems in eastern Iowa. As such, it served as an important route of travel into portions of interior Iowa and the western prairies which were home to another important resource: bison. By selecting this area as their new home, the Oneota placed themselves within an extremely rich natural environment and also secured a strategic position where they might control access to areas along the Skunk River that were rich in two highly prized prehistoric resources: bison and high quality stone.

Outcrop of Burlington limestone with seams of light-colored chert. Photo by Randy Withrow.

The Ioway Welcome Visitors

One of the most interesting items recovered from the Wever Site is also one of the smallest. It is a tiny smoking pipe carved with the image of a human face. It is made from a piece of calcium-rich mudstone, similar to rocks found along the Skunk River in parts of southwest Keokuk County. Apparently broken and discarded by its Oneota owner, it was rediscovered by archaeologists in 1993 during the excavation of a trash pit located near the south edge of the village plaza. Other items discarded with the pipe included several hundred pieces of chipping debris, a dozen or so stone flake tools, a grinding stone, a couple hundred pieces of broken pottery, and food remains including mussel shell and the bones of turtle, fish, elk, bison, and dog.

The fragment measures just over an inch long and less than one inch tall. Cone-shaped holes were drilled into the pipe, probably using a chipped-stone drill with a tapered bit, to create openings for the bowl and stem. The elbow-like portion of the pipe that remains intact was neatly shaped and carved and has many interesting details. There is a clear likeness of a human face complete with a slightly protruding nose, a noticeable chin, eyes, mouth, and incised lines carved to depict hair. Incised lines drop from the corners of both eyes as if to illustrate the tracks of tears. Those from the left eye zig-zag down the cheek and even continue along the bottom of the pipe stem.

The juxtaposition of a human face with "weeping eyes" on the bowl of a tobacco pipe calls to mind an important ritual practiced by the Ioway and other Plains tribes during the historic period. The ritual, known as the calumet ceremony, involved shedding tears upon honored guests as if mourning lost relatives and was accompanied by presenting the visitor with a ceremonial tobacco pipe or calumet. The ritual is mentioned in several early historic accounts of encounters between French traders and groups like the Ioway.

Tobacco pipe fragment engraved with weeping human face. Bowl portion of the pipe is now missing, but once extended above the face. The stem hole was at the opposite end.

> "Never in the world were seen greater weepers than those people; their approach is accompanied by tears, and their adieu is the same."
>
> *French Fur Trader Nicolas Perrot describing the Ioway, as quoted by author Bacqueville de la Potherie in Blair 1911:1:369.*

One of the first European travelers to receive this honor was a French fur trader named Nicolas Perrot. In 1685, Perrot was exploring the upper Mississippi River valley in search of new trading partners. Overtaken by winter, he established a temporary "fort" on an island in the Mississippi River at Trempealeau, Wisconsin.

There he was visited by a small group of Ioway who greeted him, in the words of 17th century French historian Bacqueville de la Potherie: *"...weeping hot tears, which they let fall into their hands along with saliva, and with other filth which issued from their noses, with which they rubbed their heads, faces, and garments of the French."* This was apparently Perrot's first experience with the Ioway, and lacking an interpreter, he clearly failed to grasp both the importance and friendly intent of the gesture. Perrot nonetheless proceeds to present his visitors with a gift of metal knives and awls to show his friendship, and the group of would-be Ioway emissaries departs, one imagines, feeling rather frustrated at their host's reaction to what was intended as an honored greeting.

Several days later, four Ioway returned to Perrot's fort with an Illinois speaker whom Perrot understood. Perrot was invited to a nearby Ioway village, now believed to have been located somewhere along the Upper Iowa River in northeast Iowa. Arriving at the village several days later, Perrot was once again greeted as an honored guest, wept upon, and offered the calumet to smoke:

> "*Twenty prominent men presented the calumet to Perrot, and carried him upon a buffalo-skin into the cabin of the chief, who walked at the head of this procession. When they had taken their places on the mat, this chief began to weep over Perrot's head, bathing it with his tears, and with moisture that dripped from his mouth and his nose; and those who carried the guest did the same to him. These tears ended, the calumet was again presented to him; and the chief caused a great earthen pot, which was filled with tongues of buffaloes, to be placed over the fire*" [Blair 1911:368-369]

Later that same winter, Perrot was honored with a full calumet ceremony at one of the Ioway villages which he mistakenly interpreted to mean that the Ioway had chosen him as "the chief of all the tribe".

Today, authorities on the rich symbolism of the Calumet ceremony believe that what Perrot actually experienced is best described as a form of ritual adoption, where the guest of honor is regarded as the reincarnation of a former tribal member, very often a prominent leader who is recently deceased. In this sense, the tearful greeting and wailing cries offered by the prominent men who greeted Perrot not only signified deep respect for him as an important guest, but also sympathy and mourning for the deceased relative he was thought to embody. According to Anthropologist Robert Hall (1997:3-8), Plains tribes like the Ioway and the Kiowa were known to greet new visitors or long absent friends with a combination of tears and wailing, as if mourning the death of a loved one. Among the Kiowa, the arrival of a visitor was also said to remind people about deceased friends and family members who were no longer alive to participate in the happy reunion.

Naturally, we cannot be certain that the pipe found at the Wever Site was created for use in this type of welcoming ceremony, but the weeping face depicted on the bowl of a tobacco pipe certainly suggests a strong symbolic connection along these lines. It also provides a fascinating measure of time depth for this custom and suggests that the Ioway may have welcomed visitors to their village at Wever this way some 400 years before the arrival of Nicolas Perrot and others like him.

Mouth of the Wisconsin River near Prairie du Chien, view from Pike's Peak State Park. Point of entry to the Mississippi Valley for many early European explorers. Photo by Randy Withrow.

References Cited in Text

Alex, Lynn (2000) *Iowa's Archaeological Past*. University of Iowa Press, Iowa City.

Blair, Emma Helen. (1911) *The Indian Tribes of the Upper Mississippi Valley and Region of the Great Lakes as Described by Nicolas Perrot, French Commandant in the Northwest; Bacqueville de la Potherie, French Royal Commissioner to Canada; Morrell Marston, American Army Officer; and Thomas Forsyth, United States Agent at Fort Armstrong.* Cleveland, The Arthur H. Clarke Company.

Buffalo Bird Woman (1987) *Buffalo Bird Woman's Garden: Agriculture of the Hidatsa Indians.* St. Paul, Minnesota: Minnesota Historical Society Press.

Hall, Robert (1997) *An Archaeology of the Soul*. University of Illinois Press, Urbana.

Nau, Anthony (1810) Map of the Mississippi River From Its Source to the Mouth of the Missouri. Published in *An Account of Expeditions to the Sources of the Mississippi, and Through the Western Parts of Louisiana, to the Sources of the Arkansaw, Kans, La Platte, and Pierre Jaun, Rivers During the Years 1805, 1806, and 1807*, by Zebulon Montgomery Pike. Philadelphia: C. & A. Conrad & Company.

Suggested Resources for Further Information about the Ioway Tribe, Oneota Culture and Iowa Prehistory

Alex, Lynn (2000) *Iowa's Archaeological Past*. University of Iowa Press, Iowa City.

Asch, David L. (1992) Prehistoric Agriculture in Iowa. In *Crops of Ancient Iowa: Native Plant Use and Farming Systems*, by David Asch and William Green, pp. 9-115. Office of the State Archaeologist, University of Iowa, Iowa City.

Benn, David W. (1995) Woodland People and the Roots of the Oneota. In *Oneota Archaeology: Past, Present, and Future*, edited by William Green, pp. 91-140. Report 20. Office of the State Archaeologist, University of Iowa, Iowa City.

Blaine, Martha Royce (1979) *The Ioway Indians*. Norman: University of Oklahoma Press.

Foster, Lance M. (1996) The Ioway and the Landscape of Southeast Iowa. *Journal of the Iowa Archaeological Society* 43:1-5.

Henning, Dale R. (1995) Oneota Evolution and Interactions: A Perspective from the Wever Terrace, Southeast Iowa. In *Oneota Archaeology: Past, Present, and Future*, edited by William Green, pp. 65-88. Report 20. Office of the State Archaeologist, University of Iowa, Iowa City.

Henning, Dale R. (1998) The Oneota Tradition. In *Archaeology on the Great Plains*, edited by W. Raymond Wood, pp. 345-414. University Press of Kansas, Lawrence.

Hollinger, R. Eric (1995) Residence Patterns and Oneota Cultural Dynamics. In *Oneota Archaeology: Past, Present, and Future*, edited by William Green, pp. 141-174. Report 20. Office of the State Archaeologist, University of Iowa, Iowa City.

Morrow, Toby (1992) *Iowa Projectile Points*. Special Publication. Office of the State Archaeologist, University of Iowa, Iowa City.

Mott, Mildred (1938) The Relation of Historic Indian Tribes to Archaeological Manifestations in Iowa. *Iowa Journal of History and Politics* 36(3):227-314.

O'Gorman, Jody (1995) *The Tremaine Site Complex: Oneota Occupation in the La Crosse Locality, Wisconsin*. Volume 3, The Tremaine Site (47 Lc-95). Archaeology Research Series. Museum Archaeology Program, State Historical Society of Wisconsin, Madison.

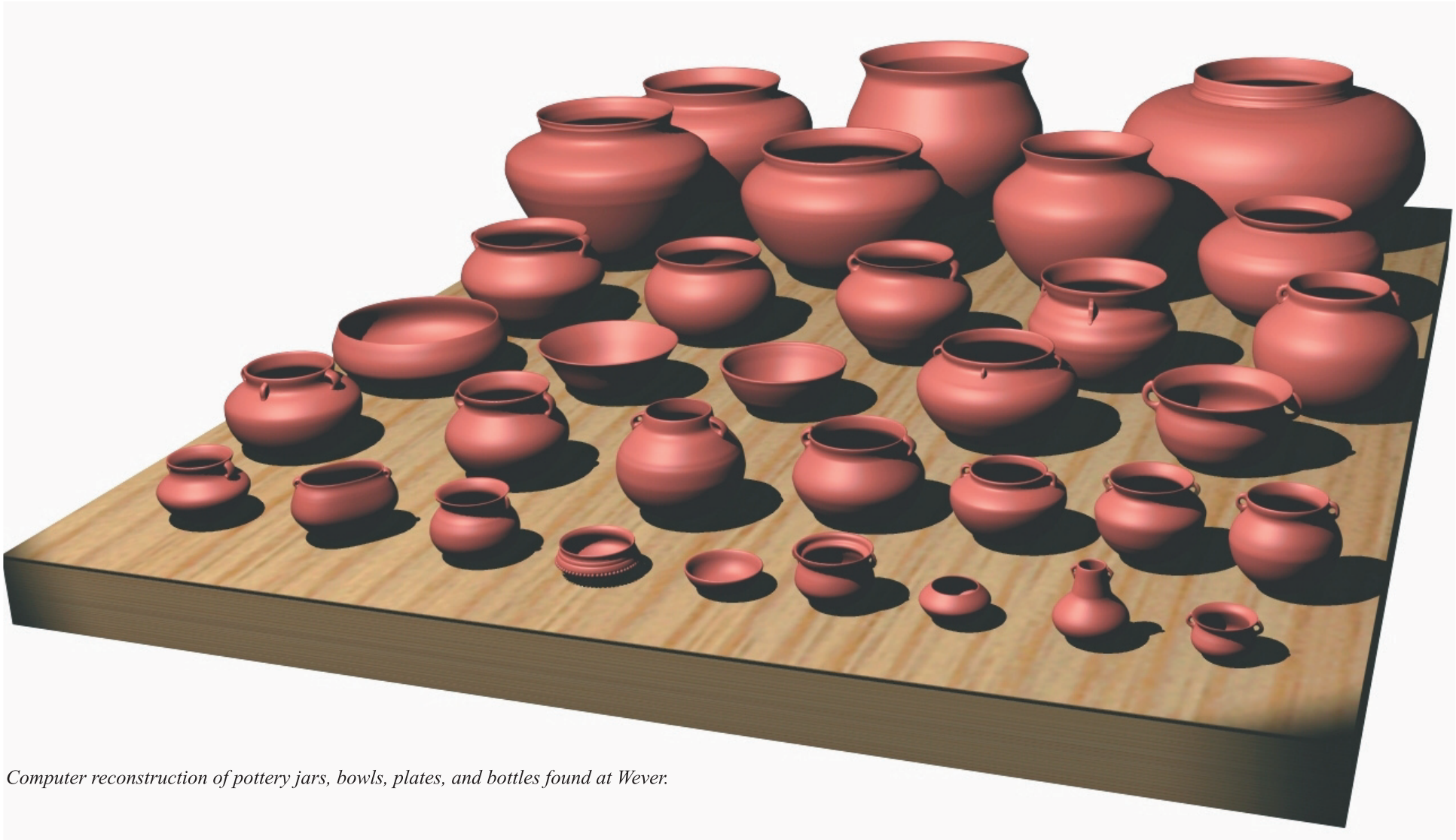
Skinner, Alanson (1926) Ethnology of the Ioway Indians. *Bulletin of the Public Museum of the City of Milwaukee* 5(4). Milwaukee, Wisconsin.

Tiffany, Joseph A. (1979) An Overview of Oneota Sites in Southeastern Iowa: A Perspective from the Ceramic Analysis of the Schmeiser Site, 13DM101, Des Moines County, Iowa. *Proceedings of the Iowa Academy of Science* 86(3):89-101.

Tiffany, Joseph A. (1997) Ceramics from the Kelley Site: Perspectives on the Oneota Tradition in Southeast Iowa. *Plains Anthropologist* 42(160):205-236.

Wedel , Mildred Mott (1959) Oneota Sites on the Upper Iowa River. *The Missouri Archaeologist* 21(2-4).

Wedel, Mildred Mott (1981) The Ioway, Oto, and Omaha Indians in 1700. *Journal of the Iowa Archeological Society* 28:1-13.



Computer reconstruction of pottery jars, bowls, plates, and bottles found at Wever.