

ARCHAEOLOGY AT THE TOBIN'S BEACH SITE BROOKFIELD, MASSACHUSETTS



Eric S. Johnson University of Massachusetts Archaeological Services

2017



This project has been financed in part with federal funds from the National Park Service, U.S. Department of the Interior, through the Massachusetts Historical Commission, Secretary of the Commonwealth William Francis Galvin, Chairman. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior, or the Massachusetts Historical Commission, nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Department of the Interior, or the Massachusetts Historical Commission.

The U.S. Department of Interior prohibits discrimination on the basis of race, color, national origin, age, gender or handicap in its federally assisted programs. If you desire more information, please write to: Office for Equal Opportunity, U.S. Department of Interior, 1849 C Street NW, Room 1324, Washington, DC 20240.



By the Shores of Quaboag Pond

This is a story about a special place—its ancient past and its more recent history. Quaboag Pond in Brookfield, Massachusetts has a deep history. This report tells some of that ancient history. It also tells some more recent history about this place, and about an archaeological study that was done here in 2017 by UMass Archaeological Services.

What is now known as Brookfield, Massachusetts has been a home to people for thousands of years, though not by that name. The ancestors of today's Nipmuck* people and the other New England tribes arrived here more than 12,000 years ago. That's 120 centuries! That is a time span that is easy to state, but impossible to really understand for most of us. It may as well be forever. It was long before the pyramids of Egypt, long before writing, even before people began farming.

Quaboag: A Special Place

From their first arrival, people knew that Quaboag Pond was a special place. For one thing, it was a place of bountiful abundance. The first people here were hunter-gatherers. That means that they got all their food from wild animals and plants rather than from livestock and crops. In fact they made everything they needed from what they could find in their surroundings: like clothing, tools, and building materials.

* The Chaubunagungamaug Band of Nipmuck Indians is the closest Native American community to Quaboag Pond. The Nipmuc Nation is a closely related community based in Grafton, Massachusetts. Both groups attach special importance to Quaboag Pond and the site known as Tobin's Beach.



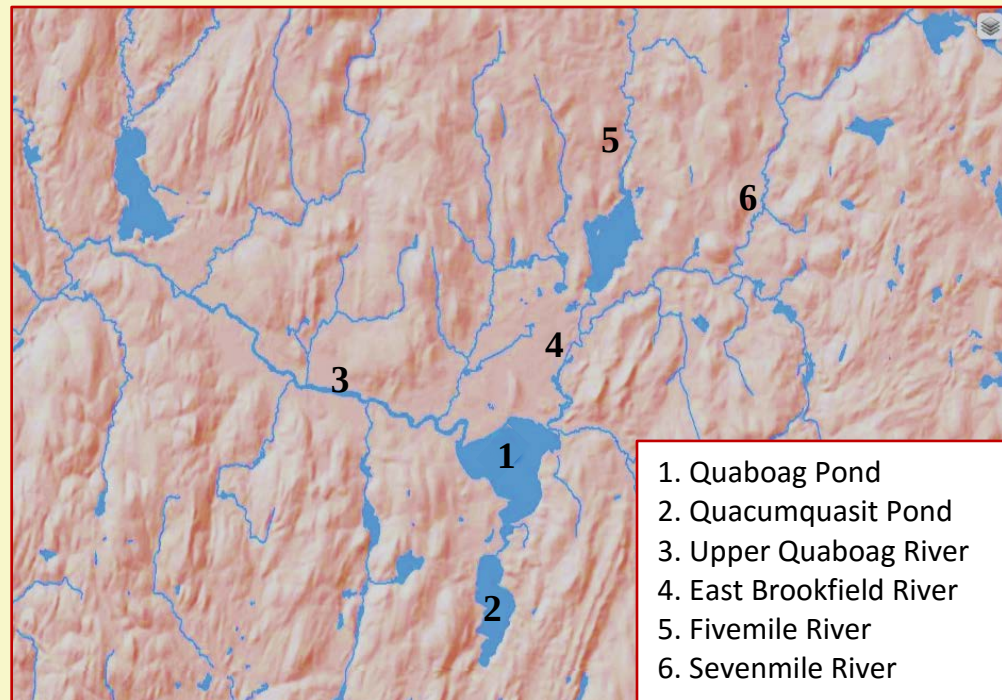
Quaboag Pond

The Quaboag Pond area was perfect for this way of life because it had so many different habitats with different kinds of plants and animals. Quaboag Pond is shallow, as ponds go. Its waters warm quickly in the spring. It would have been full of warm water fish like bass and pickerel; it still is today. Just south of Quaboag is Quacumquasit Pond, sometimes called South Pond. That is a deeper, colder body of water and holds fish like trout that prefer colder water. The third important water feature here is the upper Quaboag River. This is a slow, wide, meandering river surrounded by marshy meadows. It is ideal habitat for ducks and other waterfowl, as well as fish. In those days, fish like shad and salmon would swim up the river in huge numbers every spring to spawn in the lakes and streams. At the narrow entrance to Quaboag Pond they would experience a kind of traffic jam, which made for easy fishing. In the uplands surrounding the ponds, marshes, and rivers, there were animals to hunt and trap, and outcrops of stone for making tools like knives and spear points. For thousands of years, people successfully hunted, gathered, and fished in this special place.

Later, people developed farming, and found the lowland soils of the Quaboag area fertile ground for beans, squash, maize, tobacco, and other crops. By the time Europeans began to explore the coast, there was a large village to the west of the pond—a village called Quaboag.

People don't live by food alone. We need contact with others. We need to travel, to trade, and to meet with distant friends and relatives. The Quaboag Pond

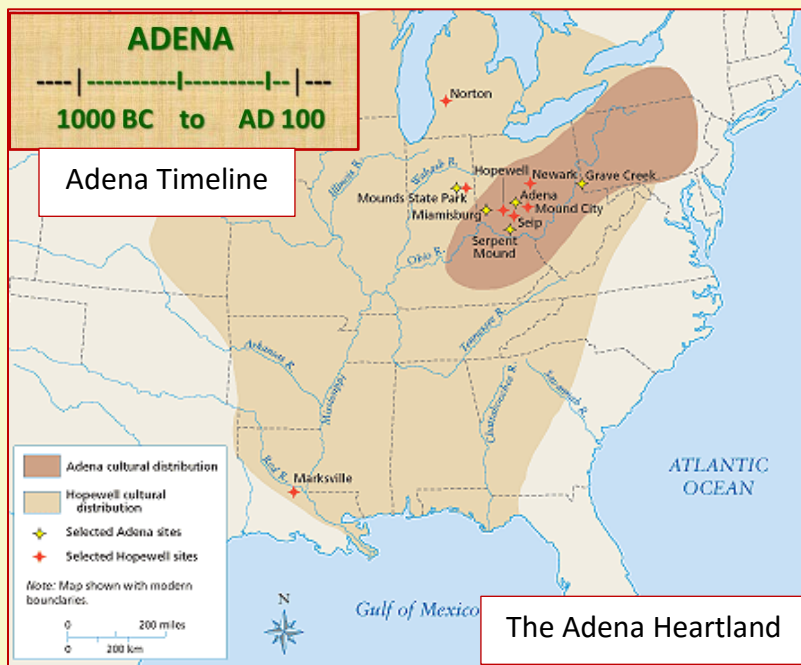
area filled this important need too. It was a crossroads for travelers on water and on land. The river was a principal tributary of the Chicopee River, which flows into the Connecticut River. Travelers on the Connecticut could turn east at the mouth of the Chicopee and paddle and portage deep into the uplands via the Quaboag River, Quaboag Pond, and the East Brookfield, Fivemile and Sevenmile Rivers. Overland east-west foot trails passed close by the pond along the routes of present-day roads like Main Street, West Brookfield Road, Rice Corner Road, and North Brookfield Road. The Quaboag area was an ancient crossroads, known to travelers near and far.



Travelers sometimes brought goods for trade with them. On at least one occasion, objects ended up in Brookfield from as far away as the south Atlantic coast, Michigan, Wisconsin, and Ohio.

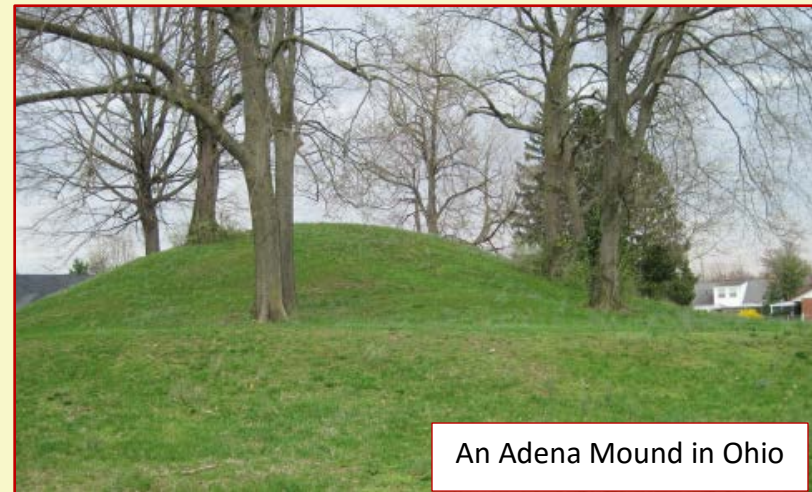
The Adena People

Some of these items definitely came from people who belonged to an ancient culture known today as Adena. The Adena people lived in the Ohio River valley between about 1000 BC and 100 AD. Adena is the earliest of what are sometimes referred to as “the mound builders,” Because one of the things they did was to build large earthen mounds in their



Midwestern homelands. That was a different practice than Northeastern tribes that did not construct mounds.

The Adena people buried their dead in these mounds, often inside tombs made from timbers, and accompanied by tools, ornaments, and other objects that had important meanings to them. Later mound builder cultures include Hopewell and Mississippian, and Native people in southeastern North America were still building mounds when the first European travelers intruded into their lands.



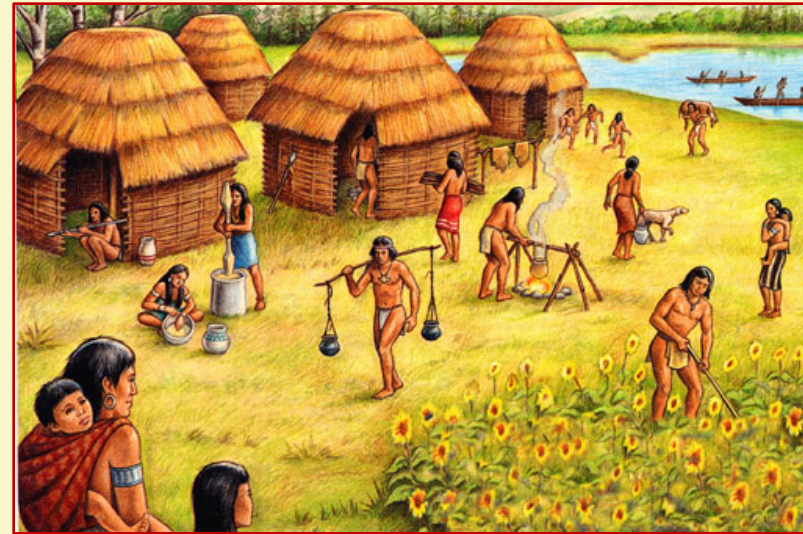
One characteristic item associated with Adena culture is the Adena spear point. These are large and well-crafted, with robust, rounded stems at the base. A special type of artifact often buried with the dead is called the tubular smoking pipe. Tobacco was and is today very important in ceremony among the indigenous people of North America. These tubular pipes may represent the roots of these rituals. They are thought to be modeled on pipes made of sections of cane. But these pipes are

carved from stone, and some are carved to resemble animals such as the duck, pictured below. Another characteristic item often found in graves are called “Adena tablets.” They are carved of stone, and thought to be used for printing on textiles. They come in many intricate patterns. Stylized birds, like the one shown here, were a favorite tablet design.



Adena Spear point, Tubular Pipes, and Tablet

The Adena people did much more than bury their dead with ceremony. Archaeological evidence from the Ohio valley suggests that people at that time lived in villages, growing sunflowers, squashes, and other seed plants. Crops like maize and beans came later. Hunting, gathering, and fishing were also important. They obviously worked well together to observe a rich ceremonial life, as evidenced by the mounds. They did beautiful and functional work in stone, ceramics, and other materials, like textiles, that don't usually survive in archaeological sites in that region. There is no evidence that people lived under a supreme ruler with more possessions and larger houses than others. The mounds were probably built by and for the community.



An Adena Village by Artist Tony Crnkovich

Archaeology

Much (though not all) of our understanding about Adena, and about the ancient past all over the world, comes from the study of archaeology. Archaeology is a way of learning about the past by studying the material that people leave behind. Mostly this means studying people's garbage. But not everything that folks leave behind is discarded. Some things are placed deliberately. Graves are the best example of purposeful burial. Archaeologists have often found graves because they are not casually discarded but carefully buried. And archaeologists have often studied graves and cemeteries for that reason: they are the products of deliberate actions that had important meanings to the people who buried their dead there. Many Adena burial mounds were carefully excavated by archaeologists in search of knowledge about the past; others

were carelessly looted by people looking for artifacts to sell. Either way, the end result was desecration to the descendants of those whose graves were dug up and forever destroyed.

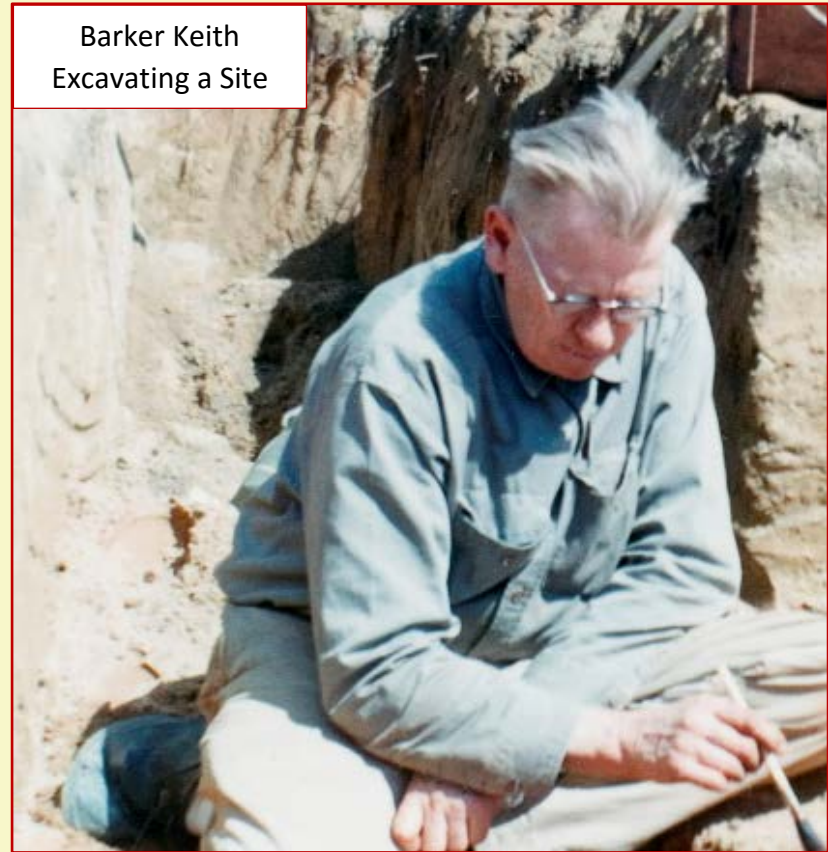
An Amazing Find

In the mid to late twentieth century, a man named Barker Keith lived on the shore of Quaboag Pond. He was an enthusiastic and skilled archaeologist although he had no advanced degree or professional training. In fact there were few professional archaeologists in Massachusetts at that time. But Mr. Keith was part of an active network of both professional and amateur archaeologists; he had learned field skills and had studied the ancient history of North America. He had collected artifacts from the ground surface and worked on several excavations in the Quaboag area.

In April of 1963, Barker Keith was visited by a man from the Brookfield Health Department who had been working on installing a trench for sewage pipes at the nearby campground, then owned by Mr. James Tobin. The man's hands were stained red. Keith asked him about it and learned that it came from the side of a trench. Keith immediately suspected that the red substance was red ochre, an iron-based mineral often used as a pigment and often deposited in graves here in Massachusetts, and in many other parts of the world too. He went straight away to the campground examined the trench and began carefully digging.

As Barker Keith began to dig, he quickly realized he had made an amazing find. He had found an ancient cemetery. He found more red ochre, but also pieces of human bone, large and small beads made from copper, large tubular shell beads and other beads made from tiny shells. Ordinarily, human bones and

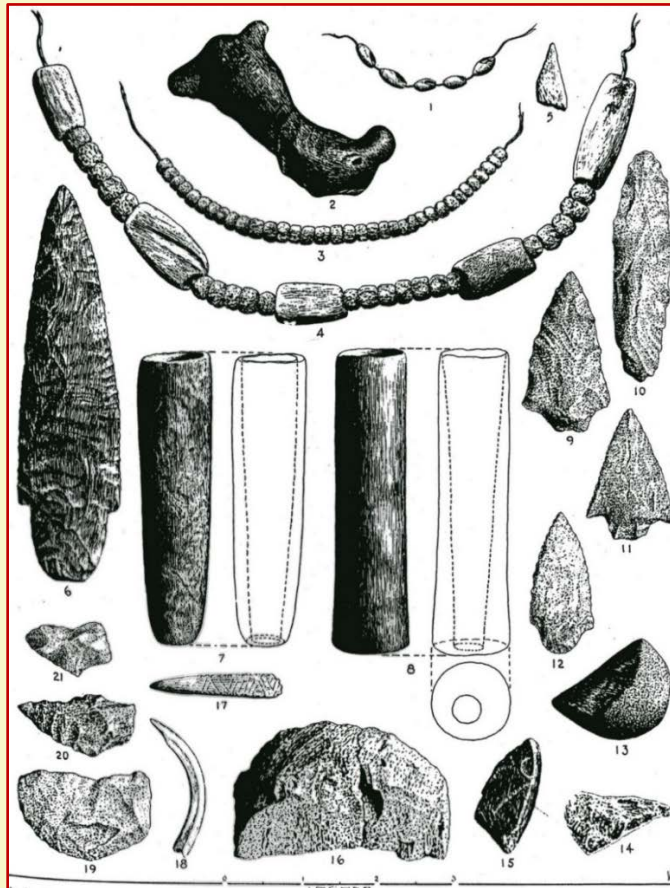
Barker Keith
Excavating a Site



organic materials like shell decay quickly in the acidic, bacteria-rich soil of Massachusetts, but copper salts from the beads dissolved into the bones and shells and acted as a preservative.

Barker Keith returned to excavate more burials and other features until 1964, when the property owner asked him to stop. By then he had identified a total of fourteen features (complexes of artifacts and soil layers, at least some of which

were ancient graves), Adena tubular pipes, a spear point, and copper and shell beads. He named the site “Tobin’s Beach” after the property owner who had given him permission to dig there. Mr. Keith published a report of his findings in the *Bulletin of the Massachusetts Archaeological Society* which included the following drawing of the artifacts he had found.



Artifacts found by Barker Keith, drawn by
William Fowler

These drawings show a mixture of artifacts that came from the Adena heartland and other distant sources, and artifacts that were almost certainly made from local materials. The artifacts made in the Adena heartland suggest that the Native people of New England had long-distance contacts and connections. Native elders today believe these exotic objects were gifts from family and friends and were placed in graves to honor the deceased.

Years later, Barker Keith donated his artifact collection, including materials he found at the Tobin’s Beach site, to the Springfield Science Museum, where they were featured in an exhibit.

New Perspectives: Changing Ideas about Archaeology

Now as you have read about how the site was excavated, you may wonder why the site was excavated rather than protected. Excavation destroys archaeological sites even as the archaeologists try to learn about the past. So apart from salvaging the remains that were unearthed, was there any need to dig any further? You may also ask why the Native American descendants of the people who buried their dead here were not involved. Unfortunately, that sort of neglect was almost always the case in archaeological excavations at that time. But that was about to change.

Later in the 20th century, archaeologists began to work with Native American tribes in a more respectful way, especially in the treatment of human remains. At the same time the goals of archaeological research shifted. Rather than trying to excavate any site that looked interesting, archaeologists began to try to protect and preserve sites. After years of effort by the

Massachusetts Commission on Indian Affairs and the State Archaeologist, in 1983 Massachusetts passed the Unmarked Burial Law. This required that Native American graves be given the same protections as the graves of other people.

At the national level, museums began to return human remains, and the objects excavated with them, to the descendant tribes. These changes weren't necessarily made voluntarily. It took an act of Congress to require museums to inventory and return parts of their collections. The act was the Native American Graves Protection and Repatriation Act, known as NAGPRA. It was passed by Congress in 1990. In addition to returning human remains and important artifacts to their rightful owners, the act required museums and Native Americans to work together to make this happen. This was not always easy for either party, but it did lead to a more equal dialogue, and helped some archaeologists to change their approach.

Changes did happen. Today, most archaeologists approve of NAGPRA and realize that they and Native American tribes share common interests in preserving the past. Recently, the bones and grave objects excavated from the Tobin's Beach Site were returned and reburied at a protected location in Worcester County.

Return to Tobin's Beach

The campground continued to operate for many years; new owners came and went. Eventually the campground closed and, recently, the Town of Brookfield acquired the property. With the property came some questions, like: Are there limits to what can be done with the land? What is an appropriate use of the property? Is there still a burial ground here or was it all excavated back in the 1960s? What is the best way to manage the property? To answer those questions, the Town needed

The campground in the 1980s



information. To get that information, the Town applied for and received a grant from the Massachusetts Historical Commission to pay for an archaeological study.

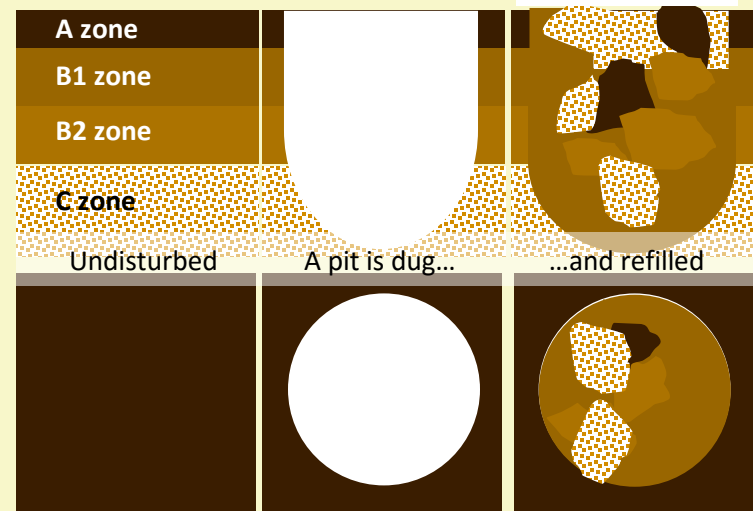


When the Town of Brookfield acquired the old campground, it came with some issues.

One of the most important goals of the study was to get evidence as to whether or not there were undisturbed graves remaining here, and to see if there were other sites here in addition to the burial ground, like places where Nipmuck people and their ancestors lived and worked.

That brought up another question: How can you show that graves still exist here without disturbing them? The plan we followed was based on our understanding of how sites are created.

In their natural state, soils in southern New England have zones or horizons, which look like layers of different colors but are really zones where the soil has been affected by plants, animals, and groundwater. The topsoil is the darkest color: brown, sometimes black. Archaeologists sometimes call this the A zone or simply “the A.” Under this is a lighter brown subsoil, which archaeologists call—wait for it—“the B.” Sometimes the B changes color as you get deeper. Usually it gets lighter or takes on a reddish or yellow color so that archaeologists might distinguish a B1 and B2. The deepest zone is the C zone, which is the unmodified “parent material,” the sand, silt, or gravel from which the upper zones formed. If someone digs a hole—for a storage pit, a fire pit, a burial, or an archaeological dig—then fills it back in, the refilled hole has a mix of different soil colors and textures. It can easily be distinguished from the surrounding undisturbed soils.



Profiles (cross-sections) and plans (top view) of disturbed and undisturbed soils

Here is something else to consider. The top part of the soil has almost always been disturbed in some way. In Massachusetts almost every acre of land has been plowed or harrowed at least once. That mixes the topsoil with the upper part of the B, creating what archaeologists call “the plowzone.” In many places, the upper layers have been removed, or new soils (fills) have been added, or both or all three.

But if the archaeologists remove the fills and the plowzone, and expose the top of the undisturbed part of the soil, we should be able to see the tops of filled-in pits. That is what our plan called for. We would carefully remove the very top layer of soil, or layers if there were more than one layer of fill, to reveal the surface of an undisturbed subsoil (this is sometimes called shovel shaving or shovel scraping). At that newly exposed surface, we would be able to see if there were places that had been dug up and refilled, but we would not dig into any graves.

Archaeology for the Community

Since the Town was our client, UMAS owed the citizens of Brookfield, and other interested people, an explanation of what we were up to. A meeting was held at Brookfield Town Hall on February 15, 2017—well in advance of fieldwork. At that meeting, UMAS Director Eric Johnson gave a summary of what was known about the Tobin’s Beach site, and what the goals of the archaeological study would be. The main goal of the study was to assess the condition of the site. Was it likely that there were still burials there? Was there evidence of other activities on the property? Another important goal was to answer those questions without disturbing any graves. Johnson explained the shovel-shaving method. He also explained that the results of the fieldwork would be the basis for



The top of a filled-in storage pit (from a different site) is made visible by removing overlying fill.

recommendations for managing the property and would include recommendations for developing educational programs. UMAS would also create a detailed map of the property showing where the shovel skimming had been done and where archaeological features were found. In addition to the technical report on the archaeology, UMAS would write a “plain language report” for the non-specialist. That’s what you are reading now. Finally, UMAS would complete an official nomination to list the Tobin’s Beach site in the National Register of Historic Places. Listing in the National Register formally recognizes the historic value of a property and also gives the town the ability to apply for grants to preserve and protect the property.

Another important part of the meeting was to talk with and listen to people in the town. Many people were very generous in sharing what they knew about the archaeology and history of



These photographs by Eileen Kennedy, are from an article in the *Quaboag Current*, written by Ms. Kennedy, reporting on the February meeting.



TURLEY PUBLICATIONS STAFF PHOTOS BY EILEEN KENNEDY
East Brookfield resident Andre Cormier brought a box of Native American artifacts to the meeting last week about the Tobin Campground property. He found them on his property, which is across the lake from the Tobin site.

the Quaboag Pond area. We learned a great deal about where people had found ancient artifacts.

In the Field

Archaeologists don't just charge into the field and start digging away. In fact, the most important part of archaeological research is not the digging, but the planning that is done before the shovels come out. Archaeological research begins with research questions, or research goals. Our questions were:

- Is it likely that there are still undisturbed graves here?
- Are there archaeological traces of other activities here?
- Are there areas that have been so disturbed that they are very unlikely to contain intact archaeological sites?

Once the archaeologists have their questions, they start to think about how they can address them, and begin to create a detailed plan for field work and other research.

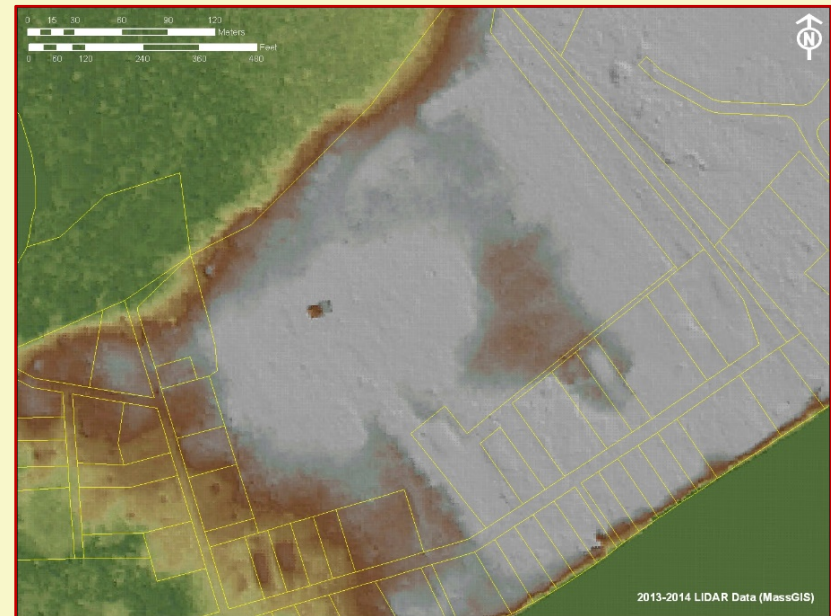
The other research—archaeologists sometimes call this “background research”—can be just as important as the digging. Our research included listening to people who attended the February meeting. We also looked at Barker Keith's field notes, sketch maps, and photos, local newspaper accounts of discoveries in the area, histories of the area, and old maps and aerial photos that show what the land looked like in recent years. A recent development in mapping is LIDAR (Light Detection and Ranging), which uses laser technology to create precise contour maps of the earth's surface. The LIDAR image on the next page shows subtle variations in the topography of the site.



Top left: This aerial photograph from 1966 shows the layout of the Tobin's Beach site only a few years after Barker Keith excavated there.

Bottom left: This 2013 aerial photograph shows the layout of the property including the in-ground pool that has since been filled in.

Below: This 2013-14 LIDAR image of the site shows higher (light gray) and lower (brown) elevations.



We also did a thorough walk-over of the site. We looked for obvious signs of disturbance (the site of a former in-ground swimming pool was one), located the general area in which

Barker Keith had dug, and observed changes in elevation, slope, and vegetation throughout the property. In this walkover, we were fortunate to be accompanied by Tom Morse, Resident Agent for the Chaubunagungamaug Band of Nipmuck Indians. Mr. Morse pointed out areas that he felt were most likely to hold graves and we incorporated his observations into our testing plan. We tested places where UMAS archaeologists expected to find traces of ancient activity, places where Tom Morse anticipated burials to remain, and places that we all agreed were likely to hold burials or other features.

Fieldwork began May 1st, when UMAS Field Supervisor Tim Barker and veteran field technician Jill Zuckerman surveyed the site and placed stakes to mark locations where we would start our shovel shaving. The following day, Tim and Jill were joined by three more members of the field team and the work began in earnest.

Jill Zuckerman sifts soil through a screen to recover small artifacts, while Al Honsinger shovel shaves a layer of fill.



The crew begins shovel shaving at the far end of a trench that extends into the front of the photo



We quickly found that the shovel-shaving went more slowly than we had expected. Some places had thick deposits of recent fill, which still had to be excavated carefully in order to avoid disturbing any intact soils that might be underneath.

We made some adjustments in the size of our shallow trenches and eventually did find evidence of refilling below the modern fill. At least two of the refilled areas had a shape, size, and location that was consistent with the burials that Barker Keith had excavated more than 40 years earlier. That was good

evidence that parts of the burial ground were still intact, and needed to be protected.

In other parts of the property we found traces of other types of features: Most of these were what archaeologists call “postmolds.” These are soil discolorations that are created when someone sets a post in the ground and later pulls it up or leaves it to rot away. The soil inside the post hole is different in color and texture from the surrounding soil; it’s like a miniature version of the pit feature illustrated on page 8. Post molds can be from posts of dwellings, or other structures, like a pavilion to provide shade or a frame to stretch an animal hide for scraping.

Jill and Al draw a plan of the top of a postmold



Another feature may have been a cooking fire. It was roughly circular in shape, and contained charcoal and very dark soil. Unlike most cooking fires, however, it did not contain fire-cracked rock. Fire-cracked rock is rock that is exposed to heat, like the rocks that line or enclose a cooking fire. The heat often causes the rocks to redden and crack. Archaeologists sometimes find more pieces of fire-cracked rock than any other kind of artifact at a site.



Overhead view of the (possible) cooking fire.
A large tree root is seen at the lower right.

In general, we found few artifacts of any kind at the site. The main reason for this is that we mostly excavated recent fill from the top of the site and did not dig down into the

underlying soil. We did sift all the soil we excavated—fill or not—through screens of ¼-inch wire mesh to make sure we recovered small artifacts.

John McNamara looks for small artifacts in the screen.



We did recover a few small artifacts left behind by the Native Americans who lived at or near the site. We found flakes of stone—the waste products of stone tool making, and the broken tip of a stone tool. We also found small pieces of a clay pot, its surface delicately impressed with a woven fabric while it was still soft to give the finished vessel a subtle texture. Although the stone tool fragment was found in the fill, the pottery sherd was found at the top of the undisturbed subsoil. This suggests that the Tobin's Beach site was more than a burial ground; it also included places where people lived and worked.



A fragment of a stone tool and sherds of pottery found at the Tobin's Beach site in 2017

After the dig had been underway for a week and a half, members of the media and the public were invited to tour the site. They viewed the shallow trenches, heard about what had been found so far, and got to ask questions of the archaeologists. It was important, and encouraging, to connect again with many of the people who had attended the start-up meeting in February.

Results of the Archaeological Study

When the fieldwork was complete and the artifacts were identified and analyzed, what had we learned? We learned that:

- There are unmarked graves still remaining here. Barker Keith's early excavations had left some of them untouched.
- There were archaeological traces of other activities at the site, like making and using tools, cooking and eating, and building: the actions of daily life.

- Although parts of the site have been badly damaged, much remains intact. We only tested a small sample of the entire site, and found artifacts and intact features beneath recent fill layers.

- The site deserves to be protected. It contains the remains of Nipmuck ancestors, and material traces of their lives.



Eric Johnson, Director of UMass Archaeological Services, chats with visitors to the site. Clarence Snyder, Brookfield Selectman, and Tom Morse, Resident Nipmuck Agent are at the left

Protecting the Past

Archaeological sites are a special kind of entrance to the past. Apart from the information they may provide to archaeologists, they are real places you can go to that invite you to think about who and what may have gone before. You can set your feet on ground where generations have lived and died, worked and played, laughed and cried. You can contemplate ways of life different from your own.

For all that they have to offer, archaeological sites are fragile. They can easily be destroyed, and once destroyed they are gone forever. That is one reason why important archaeological sites like Tobin's Beach should be protected. Another reason is that Tobin's Beach is much more than an archaeological site; it is a sacred site—a burial ground. Those who are buried there have a right to a final resting place.

Massachusetts Law recognizes this right. Laws and regulations in the Commonwealth protect burial grounds. Even unmarked graves that are inadvertently disturbed during construction are protected under law. If you are involved in an earth-moving activity and bones are uncovered, the first thing to do is to stop whatever activity disturbed the bones, then contact the state police. If the police and medical examiner determine that the bones are human, not associated with a recent crime, and more than 100 years old, the State Archaeologist is notified. The State Archaeologist immediately conducts an archaeological investigation of the site to determine the age, cultural association and identity of the buried person or persons. If the State Archaeologist determines that the burial is that of a Native American, the Commission on Indian Affairs is notified. One or more representatives of the Commission on

Indian Affairs monitors the investigation to insure that the remains are treated respectfully.

The State Archaeologist consults with the landowner to determine whether the burial can remain or be reburied in place. If that is not feasible, or it is impossible to avoid future harm to the burial, the State Archaeologist removes the remains which are ultimately returned to the Commission on Indian Affairs for reburial in a protected place.

The citizens of Brookfield are stewards of a special place. Archaeological stewardship means taking care of a site, preserving and protecting its unique qualities. Archaeological Services has recommended that the town, in partnership with the Chaubunagungamaug Band of Nipmuck Indians, carefully manage the Tobin's Beach site in the spirit of stewardship.



The Tobin's Beach site is a special place that needs to be preserved and protected