

Powerful History:

The Archaeology of Native People in the Champlain Lowlands



Native American archaeological sites along
the VELCO Northwest Reliability Project corridor
in Chittenden, Addison and Rutland Counties.

Table of Contents



Acknowledgements	ii	The Late Archaic Period.....	21
Chapter 1: Introduction.....	1	VELCO NRP Late Archaic Sites	23
Chapter 2: Vermont’s Archaeological Past.....	3	The Woodland Periods: Early, Middle and Late	25
Chapter 3: What is Archaeology?.....	5	The Early Woodland Period	25
How Sites are Found	6	VELCO NRP Early Woodland Sites.....	26
What is Context?	9	The Middle Woodland Period.....	27
Preserving Information for the Future	10	VELCO NRP Middle Woodland Sites	28
Chapter 4: The Story of the Past.....	13	The Late Woodland Period	29
The Early Paleoindian Periods—Early and Late	13	VELCO NRP Late Woodland Sites.....	30
VELCO NRP Early Paleoindian sites	16	Native Americans after European Contact	31
VELCO NRP Late Paleoindian sites	16	Chapter 5: Why is Archaeology Important?.....	33
The Archaic Periods: Early, Middle and Late.....	18	Resources: Native Americans Living in Vermont Today	34
The Early Archaic Period.....	18	Resources: Archaeology in Vermont and Elsewhere.....	34
VELCO NRP Early Archaic Sites	19	Glossary	35
The Middle Archaic Period	20		



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Chapter 1. Introduction



The Vermont Electric Power Company (VELCO) was formed in 1956 when local utilities created the nation's first statewide, "transmission only" company to share access to power across the region and maintain the state's electricity *transmission* grid. VELCO recently completed its Northwest Reliability Project, which connects portions of Rutland, Addison and Chittenden Counties via a new high-power transmission line, bringing reliable power to the state and the region.

It's a big job to create and maintain a power grid. The placement of the poles, lines and substations is a huge task by itself, however, it also takes years of planning to design a power line that will suit the needs of the communities and people it touches. Planners work very hard to protect the *environment* in the area of the power line. Part of that planning involves identifying



and learning from the important *cultural remains* of the past *preserved* in the ground and to protect them or study them before the construction starts. This is the science of *archaeology*. This is what *archaeologists* do.

Who were these groups of people that lived in Vermont in the past and what was their *culture* like? Vermont became a state in 1791, but, even years earlier, European settlers came into this area to start new lives. Revolutionary War battles were fought on this land and naval battles were waged on Lake

Champlain. Earlier still, other people were living in the areas that we now call the State of Vermont.

You may have heard stories about Indians, or *Native Americans*, once living in Vermont. Well, they certainly did. In fact, many still live here today. For thousands of years, Native Americans have been making the land of this state their home, including the areas that are now Rutland, Addison and Chittenden Counties. They were the original Vermonters.

More than 12,000 years ago, after the last great *Ice Age*, Native Americans that archaeologists call *Paleoindians* lived and moved around in the *Champlain Basin*, where the VELCO NRP was built. Soon after the first people arrived, they uncovered the secrets of the environment around them, and invented special skills to survive in this new land. Over time, Native Americans learned to make good use of Lake Champlain, the ponds, the rivers, the streams, the forests, the fish, the *game* (hunted animals) and the many other natural *resources* that people in Vermont still need and enjoy today.

Important Note

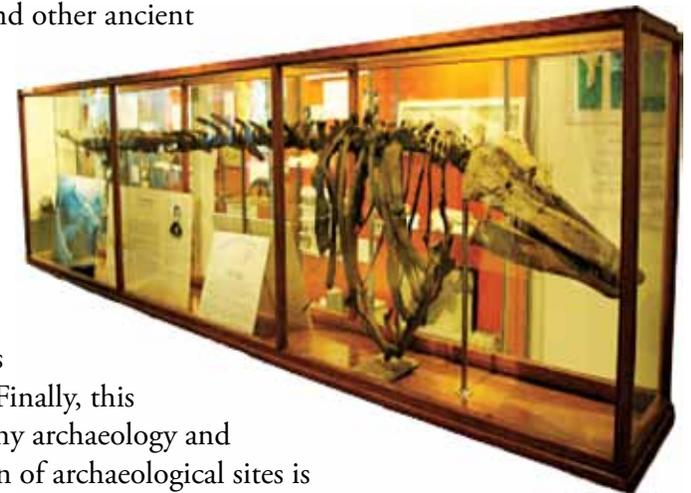
The words in *bold italics* have definitions in the glossary at the back of this handbook. These definitions will provide more information to help you understand these important terms.



Map of Vermont showing the location of counties and the VELCO Northwest Reliability Project corridor.

They hunted, trapped, and fished. They gathered wild plant foods, and, later in time, they grew crops for harvest. They built shelters, raised families and belonged to communities. They also stayed connected to other Native communities nearby and far away, exchanging news and materials such as stone, shell and copper.

Throughout this book, you will learn about these ancient Vermonters. We will show you many interesting things about the people who were living in the Champlain Basin and in other areas of Vermont. You will learn about how Vermont's environment changed through time. We will show you how archaeologists, like detectives, find clues to the past, and how they *interpret* these clues. You will learn about some of the important Native American campsites and other ancient settlements discovered during the planning of the VELCO NRP. More importantly, you will learn what these *sites* tell us about the unwritten chapters of Vermont's *history*. Finally, this book will show you why archaeology and the careful preservation of archaeological sites is important for us all and for people in the future.



The Charlotte Whale, above, was discovered during the construction of a railroad line in 1849.

Chapter 2. Vermont's Archaeological Past

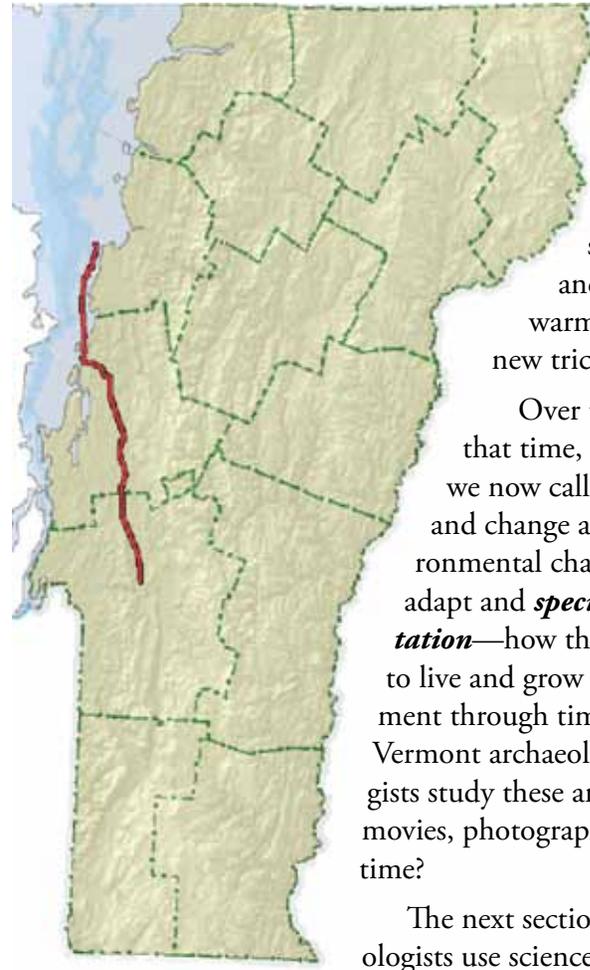


Around thirteen thousand years ago, North America looked and felt very different than it does today. The world was still in the midst of a great Ice Age. Much of the continent, including Vermont, was covered in huge sheets of ice called **glaciers**. These glaciers were more than a mile high in some places! Obviously, it was very cold, and the frigid climate made food for all living creatures hard to come by.

At that time, groups of hardy people called Paleoindians lived in areas south of the glaciers. Though they gathered and ate wild plant foods, and hunted smaller animals, these people are best known as big game hunters, and, in this case, that means really big game! They used spears, their wits, and the cooperation of other hunters to bring down and kill large animals like caribou, buffalo, and **extinct** creatures such as **mammoths** and **mastodons**. Hunting these huge animals was challenging and dangerous. Think about this: animals like the mammoth were bigger than modern day elephants!

These early Ice Age hunters were **nomadic**, meaning that they had no permanent home. Instead, they made temporary camps and moved on when the game they were hunting **migrated** to a different area. About 13,000 years ago, the last glacier that covered what is now Vermont melted and retreated northward. Soon after, the nomadic Paleoindians moved in to occupy the newly uncovered land. That movement marks the beginning of human occupation in Vermont, and so it also marks the beginning of Vermont's archaeological past.

The first Native Americans in the Champlain Basin encountered an inland, saltwater ocean called the Champlain Sea. Although archaeologists do not yet know for sure, Paleoindians probably hunted sea mammals and fished in the sea, or even ate shellfish. By the end of the Paleoindian period, however, the sea had receded and became freshwater Lake Champlain as we know it today. Over time, the glaciers melted far to the north and the temperatures continued to rise. Many of the animals the Paleoindians traditionally hunted died out and became extinct, or moved farther north. However, the new, warmer environment gave rise to other animals and other plants, and

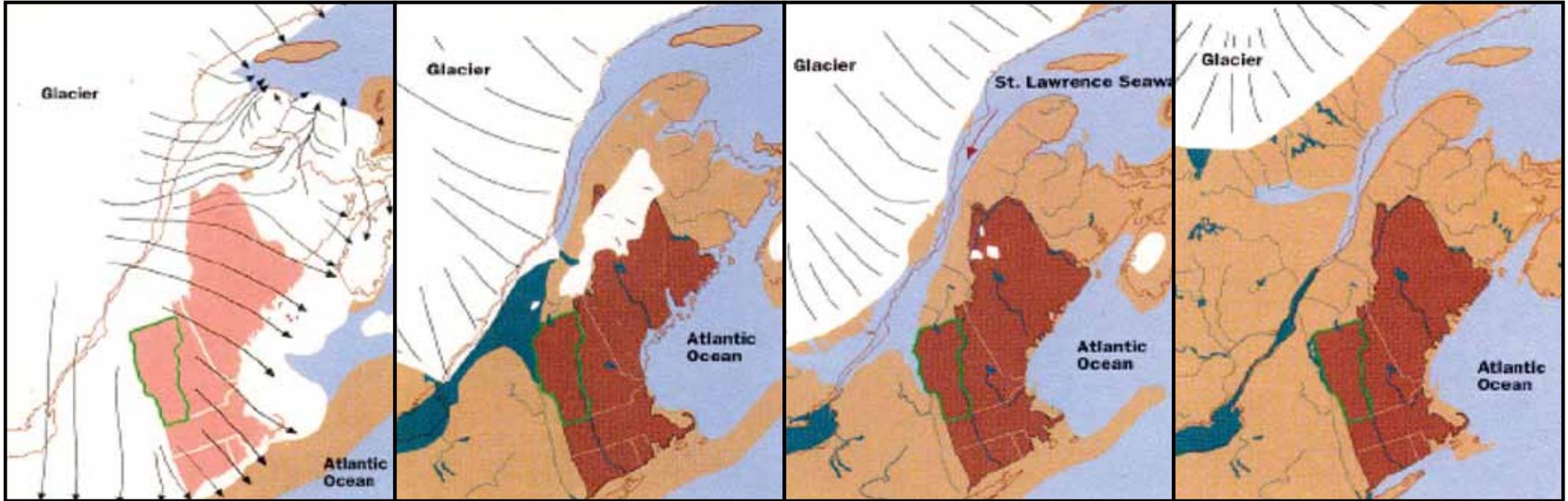


Map of Vermont showing the power line corridor and the limits of the Champlain Sea around 13,000 years ago.

other trees—eventually whole forests of trees! In order to survive, the original Vermonters learned to **adapt** to the changing environment. They invented special skills to collect resources and to live safely. They built warm, dry shelters and discovered new tricks for hunting and **foraging**.

Over the 12,000 years or so after that time, the environment of the land we now call Vermont continued to change, and change again. With every major environmental change, Native Americans had to adapt and **specialize** even more. This **adaptation**—how the Native Americans learned to live and grow with the changing environment through time—is a big area of study for Vermont archaeologists. But how do archaeologists study these ancient people when there are no movies, photographs, or written **records** of this time?

The next section will tell you how archaeologists use science and special methods **techniques** to find clues left behind by the Native Americans long ago. Then, we will tell you how archaeologists interpret and understand these clues to tell the story of the lives of these ancient people.



Source: Barry Doolan, UVM Geology Department; Geographical Services Division of Canada; UVM CAP

Native Americans moved into the Northeastern region at the end of the last Ice Age



Chapter 3. What is Archaeology?



Archaeology is the study of past people and their cultures through the **excavation, analysis** and **interpretation** of **material culture**. Wow, that's a lot to take in. Let's see if we can break that definition down a little bit.

Material culture refers to people's tools, crafts, clothing and other belongings. Objects of material culture that can be excavated and studied by archaeologists are called **artifacts**. Things that people of the past created, but that archaeologists cannot move without destroying, such as a black stain in the ground from a fire pit, or a rock carving on a cliff side, are called **features**.

Archaeologists working on the VELCO NRP searched for artifacts and features left by Native Americans (and early Euro-American settlers) of the distant and recent past. When they discovered important clues in areas where poles, roads, or substations were planned, they studied them to reconstruct the ways in which people once lived.



Archaeologists are always searching for answers to important questions about the lives of ancient people. What did Native Americans eat? What did they make or build? What did they think or believe? How did they raise their families? Where did they live? If their descendants are no longer living, why did they disappear? In most cases, none of this information was written down,

and it certainly was never photographed with a camera. So, archaeologists use special techniques to study the sites they left behind and find answers questions about people of the past.

To make things more difficult, scientists **estimate** that Vermont's soils have destroyed about 95-98% of past peoples' belongings or material culture. This is because the majority of Vermont's soils contain acid, rising and falling water, and bacteria and other **microorganisms** (small living things). Over time, these organisms eat away at almost everything made that originally came from living, organic material, like wood, plant and animal fibers, bone, and leather. You can imagine then that nearly everything Native Americans wore, lived in, carried things in or ate is gone. Luckily, plenty of clues are left in the ground.

Did you know?

History is the study of the past through the written word; the things people wrote down. Historians study the past by reading and interpreting these writings or records. Archaeologists often study prehistory. Prehistory refers to a time before writing began, or where writing was never used. Archaeologists can learn about prehistory by excavating prehistoric sites. In Vermont, prehistoric has the same meaning as pre-Contact or in other words, the time before the arrival of Europeans.

What's the difference?

What is the difference between an archaeologist and a paleontologist? An archaeologist studies materials left behind by past human cultures, not dinosaurs! A paleontologist studies the fossils of animals preserved in the ground long ago. This includes the fossils of insects, fish, birds, mammals, and yes, even dinosaurs!



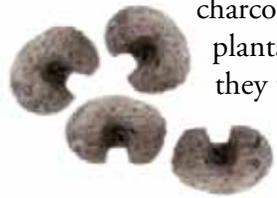


So what does last in the ground of Vermont for hundreds or even thousands of years? Stone for starters. Stone artifacts can last for a very long time in the ground. Because Native Americans had very little access to metal or other materials, they made many everyday tools and utensils from stone. A trained eye can spot these types of artifacts and know what they were used for. A second kind of material that preserves fairly well in Vermont's acidic soil is burned bone. Although bone does not normally preserve for very long in the ground, if that bone is burned, in the process of cooking a meal for instance, the form of the bone changes just enough so that it will last much, much longer. Archaeologists call preserved bone left over from Native American meals or other activities, *faunal remains*.

A third kind of material that sometimes preserves in the ground, especially if burned, is what archaeologists and scientists call *paleobotanical remains*. This term refers to things like wood, nuts, seeds and other plant remains. Archaeologists, like the rest of us, also call burned plant remains "charcoal."

Archaeologists sometimes find some of these remains in features that preserve in the soil. These features are the remains of ancient fire, storage, and trash pits. An ancient fire pit at a site appears as a very dark brown or black stain in the place in the ground where the fire burned. If archaeologists dig carefully, they sometimes can measure the shape and size of the original pit.

Archaeologists also find charcoal in the blackened earth of former fire pits. This is usually an important discovery because, as we mentioned above, charcoal can tell archaeologists many things, such as what plants the Native Americans were eating, the types firewood they used, and what time of year they were living at the site. Charcoal can also be used to estimate the pit's age, or when it was created using a special technique called *radiocarbon dating*.



Finally, Native American pottery also lasts for a long time in the ground. Unfortunately, even if a pot was buried whole, it will most likely be

broken into many pieces—called *sherds*—after years of frost, animal and insect burrowing, plowing, and so on. More importantly, like the bow and arrow, the original Vermonters only invented or began to use pottery about 3,000 years ago. Before that time, Native Americans in Vermont probably used woven baskets, bark and wood containers to store and gather food, water and other resources. Unfortunately, because people made these containers out of organic material, they almost never survive intact.



Archaeologists call the remains of fire hearths, storage pits or refuse pits "features." The photograph above left depicts the bowl shape left after archaeologists excavated the soil from a feature stain.

HOW SITES ARE FOUND

Now you know about some of the things archaeologists normally look for when they investigate a site. But how do they find these things? We mentioned at the beginning of this book that the people who built the VELCO NRP wanted to be careful not to destroy any valuable archaeological *evidence* without documenting it first. The government is also concerned about this. That is why, for large projects such as the VELCO NRP, several state and federal laws and regulations suggest that sites be searched for and, if found, judged to see whether they are important enough to be thoroughly studied, or avoided and preserved "as is."



Throughout the planning process, archaeologists talked with the VELCO NRP engineers and other planners to map out exactly where the power line would be built, and then discussed which areas were likely to contain sites that would be affected by the construction. Of course, every square meter of soil could not have been tested for evidence of past people. It would have cost too much money and would have taken too much time. Knowing this, archaeologists had to make educated guesses, like detectives, to find sites. They also used what they knew about sites they had found before to help predict where Native American sites might be located.

For instance, the VELCO NRP power line crosses a number of rivers, streams and other watercourses along its path from West Rutland to Essex, including the Otter Creek, Leicester River, Middlebury River, New Haven River, Little Otter Creek, Lewis Creek, LaPlatte River and the Winooski River. Archaeologists know that water was very important to Native Americans. The rivers, streams, lakes and ponds of Vermont were the Native Americans' natural highways. Using canoes made of dug out trees or birch bark, these *waterways* provided a quick and easy way to get through the dense forests that covered Vermont for thousands of years. Even if they were too small for a canoe, streams formed natural pathways that were used by people and the animals they depended on. Of course, water was also important for drinking, bathing, cooking, and cleaning, in addition to being a good place to get food (fish,



plants, and animals need water just as much as we do).

Think about this. If you were going camping with your family or your friends, where would you set up your campsite? On the side of a hill? Probably not. In most cases you would want a good, flat area so you and your things wouldn't roll downhill. If you were staying there for a while, you also wouldn't want to choose a spot that got flooded by a river, or washed out by rain, or was wet or swampy. On the other hand,

you wouldn't want to pick a spot that was too high up, far from water and exposed to the wind either. In other words, you would need the perfect spot. From the beginning, Native Americans were experts at choosing the ideal spots for their camps and homes.

Of course, hundreds or even thousands of years have gone by since Native Americans used most of the campsites studied by today's archaeologists. The land may have been logged, farmed, leveled or washed away by erosion, or covered over by flood deposits. It also may have looked very different. For example, a place that once might have had towering trees may now be in the middle of a farmer's field. So, archaeologists have to plan, study and think very hard about how the land may have looked in the past before they choose a spot to look for ancient camps. Even then, some spots archaeologists choose don't always contain evidence of an ancient site. It is always possible that Native Americans never visited the spots archaeologists pick to test for

Did you know?

Archaeologists all over the world use the metric system? This system enables archaeologists to measure size more easily, without conversion in the field, and enables archaeologists across the globe to share their research.

1 centimeter= .394 inches

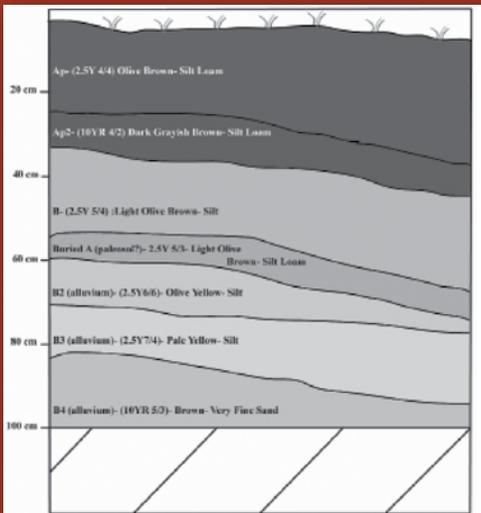
1 meter= 3.28 feet

1 kilometer= .621 miles .



Did you know?

The soil that covers a site can also tell an archaeologist a lot of information about the past? Like making a cake, or a sandwich, layers of soil are often added by nature, one on top of another. Other times, soil doesn't build up, but changes to form layers. This layering process is called stratigraphy. Archaeologists can sometimes tell the age of a site by these layers. They also may be able to tell if flooding, fire, or animal burrows have affected the site since it was abandoned.



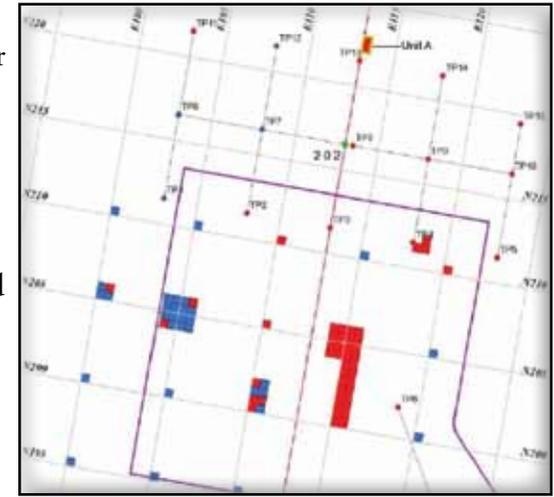
sites. It is also possible that archaeologists may miss finding some of them, because so little evidence is left at many sites.

Once archeologists find an area that may be endangered by construction, they go there and begin to look for clues. However, the first stage of an archaeological investigation does not look like the big, slow “digs” that you might have seen on television or in *National Geographic* magazine. First, archaeologists sample a promising area with small test holes to see if any artifacts or features are present.

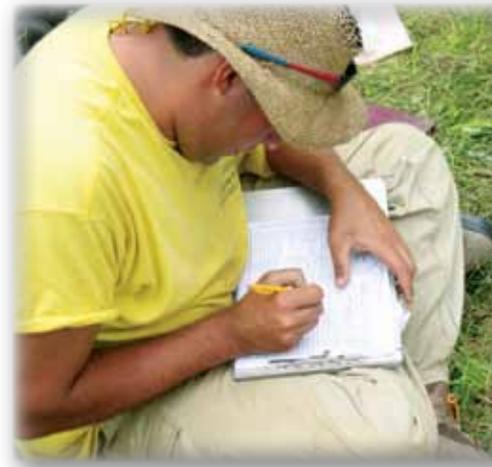
Archaeologists normally dig regularly spaced pits, looking for artifacts or features in the ground. Sometimes they will walk over a plowed area looking for artifacts on the surface. This is called a **Phase I** survey. Depending upon the size of the area, the depth of

the soil layers, and the size of the construction project, among other factors, archaeologists determine how far apart to space the test pits, how big the test pits should be, and how deep to dig their holes. Many times during Phase I surveys, archaeologists do not find anything. Sometimes, however, excavation teams discover new sites.

After all of the test pits have been dug, archaeologists return to the laboratory to wash and inspect the artifacts found at sites. In pits that contained artifacts,



Map of a site grid showing lines of test pits and blocks of larger excavation units and larger excavation blocks.



Depth	Ground Surface	Pit's and Artifacts	Soil Descriptions
10	A	L1 NAR	A 0-10cm (0y 8z)
20		2 N 1201	Black SL
30		3 NAR	
40		4 V	B ₂ 20-25cm (0y 25z)
50		5	yellowish brown SL
60		6	
70		7	SL 25-40 (0y 20z)
80		8	clay yellow SL
90		9	
100		10	
110		11	
120		12	
130		13	
140		14	
150		15	

E WALL

Location	Profile	Soil Profile	Notes	Scale	Scale
Location	OSM	OSM	OSM	OSM	OSM
Name	OSM	OSM	OSM	OSM	OSM
Number	OSM	OSM	OSM	OSM	OSM
Symbol	OSM	OSM	OSM	OSM	OSM
Other notes	OSM	OSM	OSM	OSM	OSM

Comments: Wooded area, moderate root penetration, land form slopes SW, Indian Burial ca. approx. 25cm west of pit. LDEB as quartzite

Archaeologists take detailed notes.



archaeologists record how deep they were found in the ground, and what other materials, such as charcoal, are found with them.

If a site found during the identification phase has the potential to be a significant **cultural resource**, archaeologists will move to **Phase II**—the site evaluation stage. This is a more careful excavation, where more small pits are placed in a grid pattern over an area where artifacts have been found. During this phase, archaeologists try to understand the exact size of the site, what group or groups of Native Americans lived there and when, and the site’s importance.

If the results of a Phase II site evaluation confirm to archaeologists that the site is important, and it turns out that the area can’t be avoided by future construction, then archaeologists move to the final stage of excavation: **Phase III**. This final stage of excavation looks a lot like what you may have seen on television, in magazines, or in movies. Teams excavate larger areas of soil with special care and attention to detail. They record every bit of information they can from the site and preserve it for the future.

This information is not only recorded for careful analysis, but also because archaeological sites are **non-renewable resources**. This means that once a site

or a part of a site is disturbed through construction, or excavated by archaeologists, all of the clues to the past it contains are gone forever. You could never put the soil and all of the artifacts back exactly the way they were before the site was destroyed or excavated. Therefore, unless archaeologists record every detail carefully, valuable information about the past will be lost.

WHAT IS CONTEXT?

This brings up a concept that archaeologists think is extremely important: **context**—how things relate to one another, both at the time they were used and when they are found by archaeologists. Understanding the context of an artifact or a site is how archaeologists are able to learn as much as they do from the small amount of evidence preserved from cultures of the past.

It can be explained this way. If an archaeologist finds a stone axe while excavating a site, what does that axe say about the people who used it? The archaeologist knows to look at the marks on the axe to see how it was made (usually by pecking or grinding), and how it was used. The archaeologists can

Phase I—Site Identification

Archaeologists dig small test pits and do surface walk-overs to sample promising areas and find sites.



Phase II—Site Evaluation

Archaeologists dig small test pits and some bigger units to assess the importance of the site.



Phase III—Data Recovery

Archaeologists dig larger units to excavate bigger areas and salvage portions of the site before it is destroyed.





look at the kind of stone it is made from to see where the axe maker got it; is it local stone or stone traded in from far away? The archaeologist may even be able to tell what group or groups of Native Americans were more likely to have made it by the size and shape of the tool. However, all things considered, the information that an archaeologist can gain about the people who made the tool is limited if the axe is the only clue available.

But, if archaeologists carefully document and excavate the area where that tool was found, they may be able to learn many more things. They may be able to understand what the Native Americans were doing in that area. If the site has evidence of a fire pit, archaeologists may be able to tell what the inhabitants were cooking. If there are storage pits, archaeologists can probably assume that Native Americans occupied the site for a long time. Archaeologists may even be able to tell if they were hunting there, fishing there, what season it was when they were there; even how long ago the site was occupied. So you see the information that comes from studying the relationship between artifacts and their surrounding context fills in missing pieces, tells a more interesting story and helps us fully understand the past.

PRESERVING INFORMATION FOR THE FUTURE

Finally, after archaeologists carry out all the necessary phases of investigation at sites in an area, pre-planned construction can begin. But the archaeologists' jobs are not done. Much laboratory work and analysis is left to do to finish the research and write up a concluding report. Archaeologists look

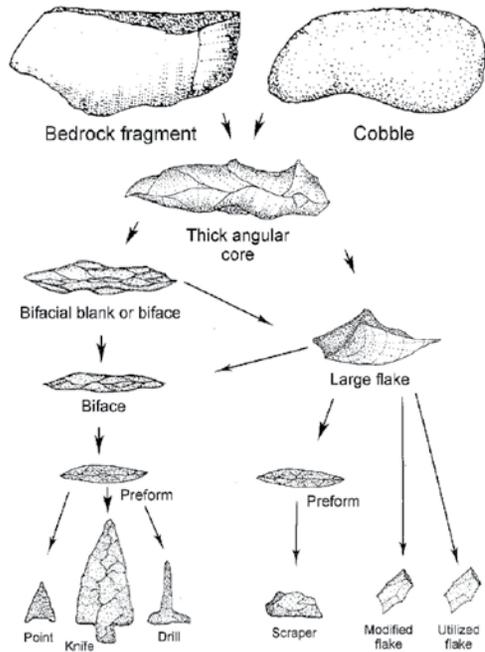
carefully at every important piece of information and every artifact to learn as much as possible from the site. Then they carefully store the artifacts and **records** and computer files for future study. If a site is very important, or sheds new light on something archaeologists did not know before, the most interesting artifacts may go into a museum where they can be displayed and viewed by everyone. The remaining artifacts are permanently placed in special storage containers so that they will be preserved forever and available for future study. This is called **curation**.

Archaeologists write down all of the information they learn in a report that is made available to everyone so that other archaeologists and the interested public can learn about the past of a particular area. Archaeologists share this information so that everyone together can gain a better understanding of how, for example, a site in Addison County fits into the bigger patterns of Native American life in New England and elsewhere in North America.

Of course, archaeologists also look to other sites that have been excavated in the same area to see **regional** patterns and make sense of things that they may not understand by looking at just one site.

That is why the VELCO NRP planning process presented archaeologists with a rare and extremely valuable opportunity to study a large area of the Champlain Basin. They noticed patterns and made connections between sites, like areas where Native American sites cluster near each other. Archaeologists can assume that an area with many sites offered up something important to which the Native Americans kept returning. Perhaps it was a good area for fishing, or hunting, or contained important plants or a particularly fine type of wood or rock. The archaeology done for





the VELCO NRP also shows us the types of places people chose to live in at different times in the past— from the earliest days of the Paleoindians to the people who were living in the **Champlain Lowlands** when the first Europeans came, and afterward. The VELCO NRP excavations uncovered sites that teach archaeologists and Vermonters things they had never known before about Native Americans in Vermont. Excavations at other sites helped confirm things that archaeologists had guessed about, or had tiny bits of evidence for, but had never been able to prove until the VELCO NRP project.

The archaeology conducted for the VELCO NRP not only was an important part of the planning process, it offers a wonderful opportunity to learn about the Champlain Lowlands' original settlers. This is especially important because as many as half the sites that once existed in this area have already been lost as a result of modern development. The NRP archaeology gives us a rare look at 12,500 years of Vermont's past—a past that was full of people living their lives and caring for their families and that archaeologists can help us understand before it is lost or forgotten.

The following section will describe an archaeological **chronology** for the groups of Native Americans that lived here in Vermont's Champlain Lowlands through time. This chronology will be illustrated by sites found during the VELCO NRP archaeological studies. You will learn how archaeologists uncover evidence of Vermont's ancient past, the special places where Native Americans once lived, and some of the interesting activities that archaeologists now know took place long ago.

How Native Americans made stone tools.

Native Americans generally made and used two types of tools throughout prehistory.

The first are called flaked stone tools. Flaked stone tools were important because their makers could give them a very sharp edge. These tools must be fashioned from special rock that breaks along even, smooth planes, much like glass. Native Americans were masters of making these kinds of tools.

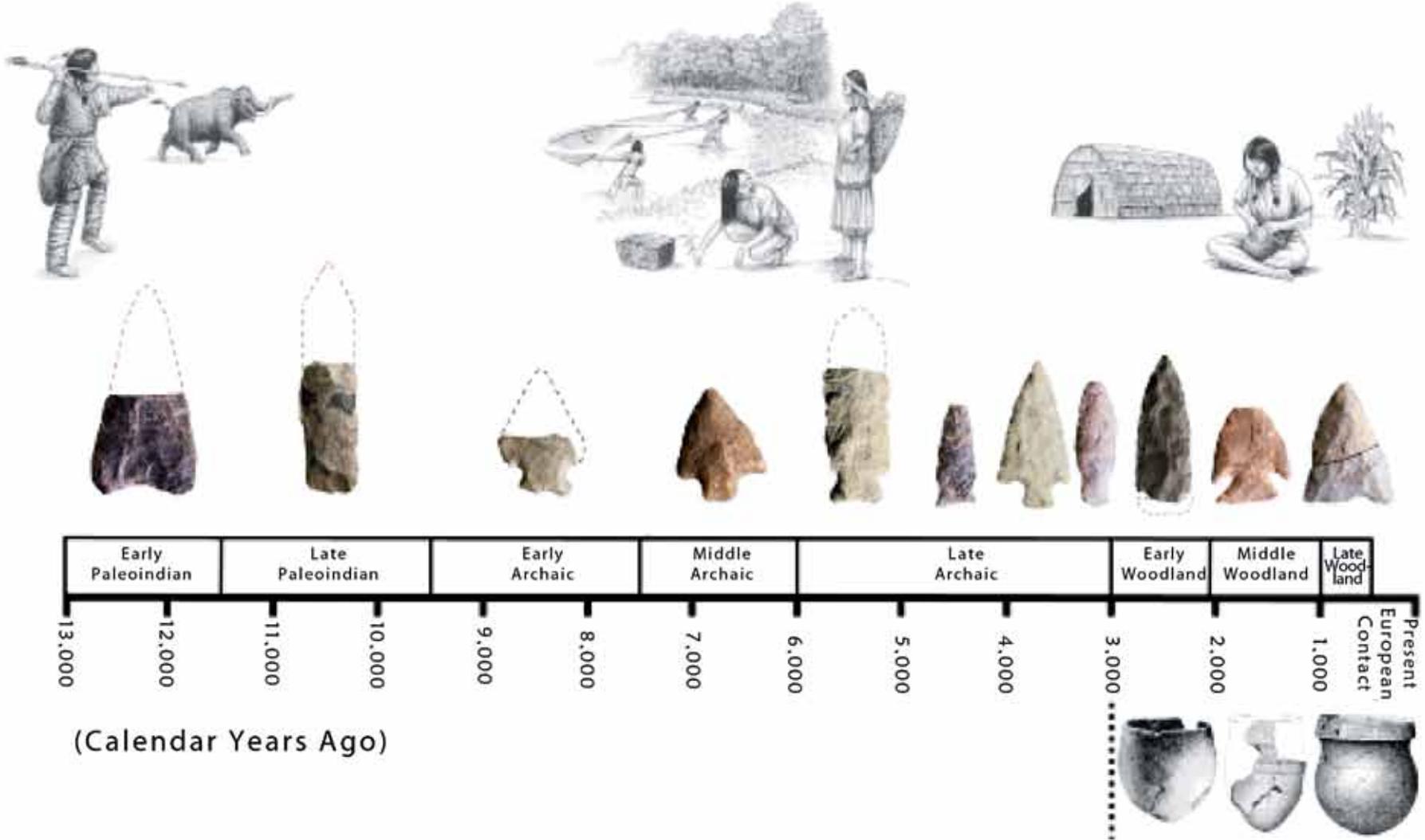
They carefully hit this special stone with another stone, antler, or other hard material so that flakes came off of the stone in a regular way. If you look at a projectile point closely, you will see small ridges on its surface. This is from the careful chipping or flaking done by Native Americans to whittle the stone down to that shape. Archaeologists are always on the lookout for the chips or flakes left over from tool or point making, because they are often the first and most obvious sign that Native Americans were in an area.

Archaeologists have found many kinds of flaked stone tools in sites from all periods. Some of these include: scrapers, drills, knives, and of course, projectile points!

The other type of Native American stone tools recovered in Vermont is groundstone tools. These tools were made by slowly grinding, flaking, and/or pecking away at certain kinds of stone to create a shape that could be used for specific activities. This took a long time, so they often chose rounded cobbles and shaped flat ends, or put notches in them to get the shape they needed. Many artifacts were made using the groundstone technique. These include: axes, grinding stones, fish net weights and many others.



Northeastern Native American Archaeology



All projectile points shown were recovered during excavations conducted for the VELCO Northwest Reliability Project

Approximate date of pottery introduction



Chapter 4. The Story of the Past



Early Paleoindian Period

Time: approximately 12,500-11,200 calendar years before present.

Environment: Although the glaciers had retreated, the environment was still quite cold. Vermont likely had a lightly forested landscape of pine and spruce. The Champlain Sea was also in the Champlain Valley.

Tools: Fluted projectile points, scrapers, bifaces, wedges, spears. The Paleoindians used local stone and stone material from quarries outside of Vermont for their tools.

Food: Though the early Paleoindians collected wild foods, and hunted and trapped small animals, they are primarily known as hunters of big game such as caribou and perhaps even mammoth, seals or whales from the Champlain Sea.

important to the preservation and understanding of the past that they were declared eligible for the *National Register of Historic Places* and the Vermont State Register of Historic Places. That means that extra attention and special care had to be used to excavate many of them, often including the Phase III stage that we talked about before. Information gathered from these special sites will be the focus of the following sections. Wherever possible, VELCO

The archaeology work performed for the VELCO NRP uncovered prehistoric sites that date from about 12,500 years ago all the way up to sites that were in use around the time when the first Europeans entered Vermont around A.D. 1600 (see the timeline on page 12). That is more than 550 generations of families living in what is now the Champlain Basin!

In all, 113 prehistoric or *pre-contact* Native American archaeological sites were investigated along the power line corridor. All of these sites tell archaeologists stories about the past, and about the unwritten history of Native American groups or cultures. At least 28 of these sites were considered so special and

engineers avoided important sites by changing the location of poles or covering over sites with special mats during construction. VELCO helped preserve many whole sites and large parts of others for future generations.

THE EARLY PALEOINDIAN PERIODS—EARLY AND LATE

The first people to enter Vermont came here about 12,500 years ago. Archaeologists call this period the Early Paleoindian period. During the Early Paleoindian period, the land that is now Vermont looked quite different from the way it does today.

Perhaps the biggest difference between then and now was that a saltwater arm of the Champlain Sea covered the area that is now Lake Champlain and much of surrounding, low-lying valley areas. From about 13,000 to 10,000 years ago, the water was much higher than the level of Lake Champlain today. Seawater covered the lowland sections of Addison and Chittenden Counties, and many of the hills near today's lakeshore would have been islands in the sea. The thick clay that farmers sometimes plow near the lake is the sediment that was once lying at the bottom of the sea!

The Champlain Sea was home to creatures not found in the lake today, such as ocean fish, seals and even whales! Scientists also believe that, like today, the Champlain Basin was also a major flyway for ducks, geese and other migratory birds. The Paleoindians may have hunted these fowl in addition to fishing and hunting large animals. The food resources in and around the Champlain Sea must have been a great attraction for the Paleoindians who first populated the Champlain Valley. In addition, the shrinking Champlain Sea likely provided an added bonus to the Paleoindians—*warmth*. Scientists believe the Champlain Sea created warmer air that was probably much more pleasant than the colder winds blowing in from the north.



Mammoth may have been hunted during the earliest portion of the Early Paleoindian Period.

us today, they nevertheless supported a range of plants and animals similar to the sub-arctic zones found today in northern Canada. In addition, the forests also fed giant vegetarians such as the mammoth and mastodon, which had not yet gone extinct.

When archaeologists combine these aspects of Vermont's past environment, they can **hypothesize** about the things Paleoindians were doing, and the places where

After the last great Ice Age ended, temperatures in the Champlain Valley warmed up slightly. Most of the land that is now Vermont became covered by plants that could handle the cold, including a thin forest of spruce, fir, pine, and birch. Even though the forests were sparse compared to those around



Caribou were likely an important food source for Paleoindians.

they may have chosen to live. Although good clues exist, it is still difficult to figure out the lives of the Paleoindians. So much time has passed since they were here. Also, as we discussed earlier, Vermont's acidic soils do not often preserve organic materials for very long. Archaeologists know that there is almost no hope of ever finding anything organic, like wooden tools or clothing, dating from the Early Paleoindian period in the ground today. But even things that archaeologists might expect to find in more recent sites, like burned bone and fire pits, are not likely to last for 13,000 or 12,000 years in Vermont's acidic soil. So, archaeologists have to unlock the secrets of the lives of the Paleoindians using the artifacts that *do* survive, such as those made of stone, and other clues, such as the context within which they are found, and reconstructions of what the environment was like.

Nearly every period and every **archaeological culture** has its own **distinct** way of making tools. In Vermont, **projectile points** are the most individually shaped, or distinct tools that archaeologists examine to discover the age of a Native American site. Archaeologists can recognize many different projectile point styles and can often tell what groups made a certain point in the past.

What is this called?



If you said an arrowhead, you are only half right. Actually, archaeologists call any tool with this shape a projectile point. You see, for thousands of years the Native Americans in Vermont did not use bows and arrows. Instead, they used hand-thrown spears, or spears and atlatls (spear-throwers).

A projectile point is a more general term that refers to any pointed tool, including spear points and arrow points, that was thrust, thrown, or shot (projected).



When archaeologists match types of projectile points with different periods of time and different groups of people, they create a **point typology**.

There *are* a few lucky breaks for archaeologists studying the Paleoindians. Nearly all Early Paleoindian groups across the continent used versions of a type of projectile point called **Clovis**. It is distinctive because of its leaf-like shape and because it is often **fluted**, or made with a channel that runs up both sides of the point. Clovis-type projectile points have been found from Maine to Texas to Alaska, and they all seem to come from the Paleoindian cultures.



Early Paleoindian projectile point base recovered from site VT-AD-127 along the Leicester River in Salisbury.

Archaeologists also discovered convincing evidence that Paleoindians shared preferences for the types of stone that they used to make their stone tools. In the lesson on page 11, you learned that in order to make **flaked stone tools**, Native Americans needed special, glassy stone that broke away in even, regular ways. In later periods, Native Americans quarried stone from sources found near their homelands. However, Paleoindians, who were the first humans to arrive in Vermont, often got their toolmaking stone from quarries located great distances from the sites where archaeologists discover them.

Archaeologists are still unsure why Native Americans, especially the Paleoindians,

went through the effort to get **exotic**, or faraway stone. But, most archaeologists feel that this is solid evidence of long-distance movement, or even of trade between different Paleoindian groups. It is possible that a single person or groups of people would go to New York, Québec, Maine, Pennsylvania, Ohio, and many other places following game or simply to collect stone along the way. It is more likely, however, that people who lived mainly in New England traded over long distances for good or familiar types of stone, or stone that held special meaning because of its color or where it came from.



Red chert from Munsungun Lake in northern Maine. It was widely used by Paleoindians in the region, including groups in Vermont.

How did Native Americans use spears to kill game?

Archaeologists know that before the bow and arrow was introduced, Native Americans used spears to hunt. However, they were not just throwing spears by hand. They also used a special tool called an atlatl. An atlatl is about the length of your forearm, with a handle on one end, and a hook on the other. A hunter would hook the spear onto the end of the atlatl. When the hunter threw the spear, the hunter's hand would let go of the spear but maintain the throwing motion with the atlatl. Using this tool increases the speed and accuracy of the spear and improves the hunter's chances of hitting the target.





Trade in stone may have been a way for Paleoindians to keep in contact with other faraway groups, or perhaps they felt that they needed certain stones for spiritual or cultural reasons. Whatever those reasons may have been, it is always exciting to see a stone from as far away as Pennsylvania or northern Maine in an archaeological site in Vermont. It tells a long-lost story of people trading and travelling.

VELCO NRP Early Paleoindian sites

During the VELCO NRP archaeological investigations, very little evidence of the Early Paleoindian period was identified. Two characteristic fluted points that were found at from the Leicester Flats site (VT-AD-127) in Salisbury, Vermont, by a local family are the only trace of these early people discovered along the route of the power line. The site area (which was used throughout *prehistory*, and will be discussed more below), is located along the Leicester River, close to Lake Dunmore and the Green Mountain foothills. It made for a very good spot to camp, and also provided access to productive hunting and fishing areas.

The Leicester Flats site is also located beyond the edge of what was once the Champlain Sea, but not too far away. Although there is no way to know based upon the slim evidence, the Early Paleoindian people at the Leicester Flats site may have made use of ocean resources as well.

VELCO NRP Late Paleoindian sites

Over the next thousand years or so, Paleoindian groups became increasingly familiar with the land around them. At the same time, the biggest of the animals they once hunted, the mastodons and mammoths, went extinct. Because of this, during what is called the Late Paleoindian period, the Native Americans adapted for survival in more densely forested land, and probably

began to hunt smaller game, like deer, much more often.

As the Native Americans of the Late Paleoindian period became more familiar with their new environment, they became more specialized. They began to learn more about Vermont's food and other resources. As they changed their lifeways in order to live comfortably within better-defined territories, their culture became more localized. They no longer shared as much with other groups across the continent. Paleoindians living on the Great Plains, or in what is now Colorado and New Mexico, began to form a very different lifestyle from the Paleoindians living here in Vermont. Nevertheless, there is still plenty of evidence of trade and communication, such as the projectile point

Late Paleoindian Period

Time: Approximately 11,200–9,500 calendar years before present.

Environment: The environment slowly began warming, and the rivers began to become established within their valleys. The Champlain Sea receded from its maximum extent and disappeared by the end of the period.

Tools: During the Late Paleoindian period, people began to make a wider variety of projectile points, including pumpkinseed shaped Cormier/Nicholas points and long, thin St. Anne/Varney points. While their toolkit was expanding, many of the tool forms made in the Early Paleoindian period were still made and used during the Late Paleoindian period. Exotic stone was still important and widely used during this time, but people began to use more local tool stones as well.

Food: Local food resources became more important during the Late Paleoindian period. Although hunting was probably the primary way to get food, some evidence suggests that fish from rivers and lakes began to be important as well.



Late Paleoindian projectile point base recovered from site VT-AD-572 in Brandon.

styles, shared by Late Paleoindian groups across the North America.

Late Paleoindian sites are very rare in Vermont, and across much of the Northeast. In fact, until about twenty years ago, some archaeologists didn't believe people lived in the Northeast during the Late Paleoindian period. That is why archaeologists were very fortunate to find a Late Paleoindian site during the studies conducted for the VELCO NRP.

Archaeologists discovered the Arnold Brook site (VT-RU-572) in Brandon on a small tributary of the Otter Creek. They found a portion of a Late Paleoindian, *Saint-Anne/Varney*-type projectile point in an excavation pit. This type of point is not fluted like the earlier style, but has a tell-tale, narrow, spear-like shape and a characteristic pattern of flaking along its edges. Although the area would have been a perfectly good camping place for later Native American groups, the site's location is interesting because earlier, during the Early Paleoindian period, Native Americans almost never camped on streamside landforms. The site's location suggests that the people quickly learned to use new areas and resources as the environment changed during the Late Paleoindian period.

Even more evidence of the use of new resources comes from a number of tools recovered from the

Arnold Brook site. Unlike the finely made *scraping tools* commonly recovered from Early Paleoindian sites in the region, a large number of the tools recovered from the Arnold Brook site were large coarse tools with one roughly sharpened

or utilized edge. What could these have been used for? Well, there is little reason to think these tools would have been used to process hides or bone because perfectly good tool technologies already existed to do those jobs. Instead, these tools were probably made to exploit a new resource in the Champlain Basin: wood! The size and shape of the tools suggests that they were probably quickly made to process trees growing in these areas; trees that hadn't been around when their ancestors lived there.

This rare site illustrates just how much archaeologists can learn from a small amount of evidence. More recent periods are represented by more sites and more evidence in the form of better preserved artifacts and features. As a result, we know more about life in Vermont during the subsequent archeological periods.

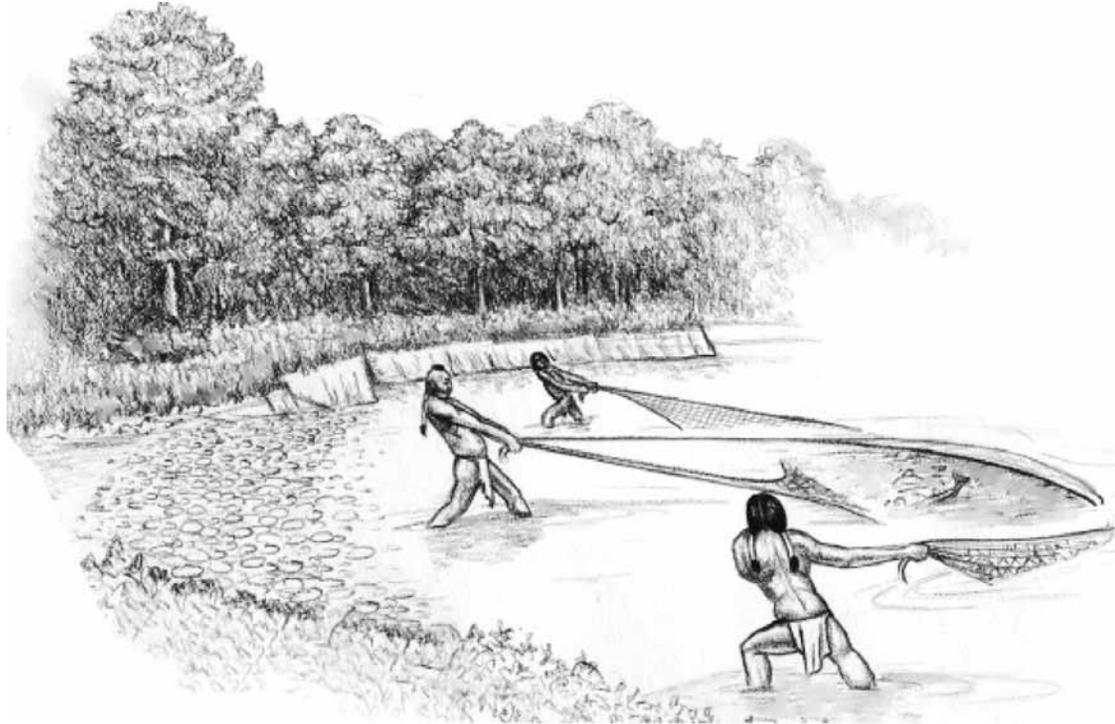


Crew member taking notes in an excavation unit at the Late Paleoindian, Arnold Brook site, VT-AD-572 in Brandon.



THE ARCHAIC PERIODS: EARLY, MIDDLE AND LATE

As Native Americans settled in what is now Rutland, Addison, and Chittenden Counties, they became more familiar with their environment and its changes. At a certain point (archaeologists usually assign the date of 7000 B.C. or about 9,000 years ago), their cultures and ways of life changed so much that archaeologists place them within a different period. This marks the beginning of the Early Archaic period.



During Archaic times, fishing became important to Native American groups in Vermont. People also began to use a variety of other plant and animal resources that appeared as the climate warmed.

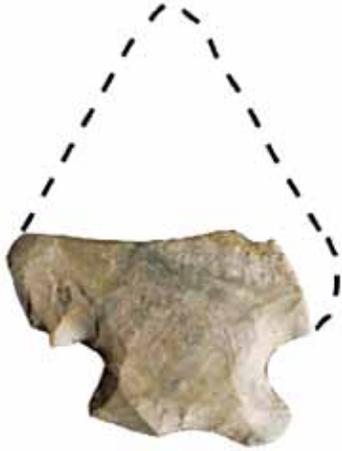
THE EARLY ARCHAIC PERIOD

Sites dating to the Early Archaic period are very rare in the Northeast. In fact, as with the little known Late Paleoindian period, until about twenty years ago, there were some who argued that Native Americans died out or left the Northeast until sometime after the Early Archaic period. We now know that that is not the case, but the rarity of sites still suggests that populations were smaller than those during later periods in prehistory.

It was not only the Native American groups that were changing. As we mentioned before, the environment continued to change as well. Its warmer temperatures helped to shape many kinds of wetlands, from lakes and ponds to swamps and bogs. Toward the end of the previous Paleoindian period, the ancient Champlain Sea shrank and became disconnected from the ocean, making it the freshwater lake we know today. During the Early Archaic period, however, the newly formed Lake Champlain was likely lower than its present-day level.

A variety of plants began to spring up in this warmer, wet environment. The pine forests of the Paleoindian period were taken over by hardwood forests of beech, oak, ash, and maple, among other species. These trees, especially those that produced nuts, brought new animals and birds in the area, and of course, the Native Americans had to invent new hunting and foraging techniques to make use of all of these new resources.

Evidence of increased *specialization* is found at archaeological sites from this period. Previously, in Paleoindian times, Native Americans often used exotic stone from far distances for their stone tools. During the Early Archaic period, however, people began to rely more heavily on local stones from Vermont. This interesting change shows archaeologists that, during the Early Archaic period,



Early Archaic Bicurcate-based projectile point fragment recovered from site VT-AD-127 in Salisbury

Native Americans were becoming even more familiar with their local environment. They were probably spending more time in what is now Vermont, rather than regularly travelling long distances.

Archaeologists generally think that by the time of the Early Archaic period, families or perhaps even bigger groups moved to different camps with the seasons, hunting or harvesting the resources that were available during specific times of the year. These groups of people ranged through a broad territory within and beyond the Champlain Valley. Families may have even returned to the same places year after year.

VELCO NRP Early Archaic Sites

Archaeologists found two sites dating to the Early Archaic period along the VELCO NRP line. Each site provided rare and important clues about this ancient time period, and helped us understand this period of Vermont's Native American past.

The Leicester Flats site along the Leicester River in Salisbury contained evidence of an Early Archaic occupation. Like the evidence of the Paleoindian period from the site, particular styles of projectile points recovered by archaeologists are the only direct evidence of the people of the Early Archaic period that once lived in the area.

While the information regarding the Early Archaic people from this site is limited, it is extremely rare to find a site that was used during both the Paleoindian period and the subsequent Early Archaic period, particularly

because the environment was changing so much. This repeated use of the site suggests that the resources there were very abundant, a point made even more dramatically by the evidence of all of the subsequent Native American occupations found there.

The other Early Archaic site, designated VT-AD-1390, was found along an old stream channel of the Middlebury River in Middlebury, Vermont. This site is very interesting because it contains three Native American occupations dating to different periods of time, separated like a six-foot-deep cake by layers of soil deposited by floods over the centuries. The earliest and deepest of the deposits dates to the Early Archaic period.

Early Archaic Period

Time: Approximately 9,500–7,500 calendar years before present.

Environment: The environment continued to warm. This warming helped to form many kinds of wetlands, from lakes to ponds, to swamps and bogs. Forests became more dense and the warmer temperatures allowed hardwood trees like beech, oak, ash, and maple to grow.

Tools: During the Early Archaic period, Native Americans in Vermont used several different but related types of projectile points, including the bifurcate-based and Swanton Corner-Notched types. The people of the Early Archaic period also made a greater variety of tools, such as small scrapers and tabular knives. They also began to use more locally available materials for their tools, notably including quartz.

Food: Foraging for different wild foods probably took on a greater importance in the Early Archaic period. Nuts, seeds, and a variety of edible plant foods were likely hunted when they were in season. Hunting was still certainly widely practiced, but fishing also became increasingly important. Paleoindians likely used animal and bird skins for clothing.





Middle Archaic Period

Time: Approximately 7,500-6,000 calendar years before present.

Environment: The environment continued to warm. Although archaeologists have done little research on the environment of the Middle Archaic period in Vermont, the position of some Middle Archaic sites in areas now covered by water suggests that the climate may have been drier during this time.

Tools: During the Middle Archaic period, Native Americans in Vermont used several different but related types of projectile points, including the Neville and Stark types. These projectile point types were first identified at sites excavated along the Atlantic coast.

Food: Like the environment, little is known about the food procurement strategies people of the Middle Archaic period in Vermont. It is assumed, however, that these strategies were similar to those of the Early Archaic period.

Archaeologists found several quartz scraping and cutting tools that are characteristic of the Early Archaic period. These tools suggest that perhaps a special resource, like wood or plant fibers, was being processed at the site. Even rarer, several features that likely are the remains of fire hearths or refuse pits were identified deep below the ground surface and capped by flood soil. Archaeologists washed the soil from these features through fine-weave mesh (the same screens used for windows) and recovered tiny flecks of charcoal that were then sent to a laboratory for radiocarbon dating. Both features were found to date to around 9,000 years ago, or near the beginning of the Early Archaic period.

The site proves that Native Americans were hunting, fishing and collecting plants along the river during the Early Archaic period. Moreover, because the features do not date to exactly the same time, the area might have been repeatedly occupied

by several Native American groups over the course of the Early Archaic period. Based upon the limited excavations conducted at the site, archaeologists are not sure whether the site was used primarily as a camping place, or as a special hunting camp, or a place to gather resources from the nearby river. The relatively small numbers of tools and the small size of the features suggest that only a small group of people, perhaps a family, camped in the area at any given time.

THE MIDDLE ARCHAIC PERIOD

As little as ten years ago, except for isolated projectile point finds, not a single site in the state of Vermont could be dated to the Middle Archaic period. The archaeological surveys conducted for the VELCO NRP changed this situation rather dramatically. A portion of the Leicester Flats site, within what is now a wetland, contained a dense concentration of artifacts and a feature that dates to the Middle Archaic period.

Archaeologists were excavating through the dense clay soil when they noticed a slight color change. Excavating the darker soil carefully, and



Early Archaic feature at site VT-AD-1390 in Middlebury. Charred white pine fragments from this feature dated to approximately 9,200-9,000 calendar years ago.



Middle Archaic features partially excavated at the Leicester Flats site. This feature dated to 6,800-6,550 years ago.

saving the soil for the laboratory, they eventually uncovered a portion of a large, deep feature. Within and around the feature soil, they found many *flakes* and fragments of stone, indicating a place where Native Americans made stone tools. Scraping and cutting tools also suggested that they processed hide, wood or other plant fibers there too. Importantly, within the feature, the



Nevil point recovered from the Leicester Flats site, VT-AD-127, in Salisbury.

excavation team discovered a broken *Stark*-type projectile point. This tool's style confirmed to archaeologists that this portion of the site dated to the Middle Archaic period. Interestingly, another excavation team found another *Neville*-type Middle Archaic projectile point a short distance away. Both Stark and Neville-type points have short-stems on their bases that were used to *haft* the spear points onto spear *shafts*.

After laboratory processing, technicians found only a small amount of charcoal in the feature soil. Nevertheless, there was enough to radiocarbon date it, and the age of the charcoal confirmed that the feature dated to the Middle

Archaic period. The small amount of charcoal suggests that the feature was likely not used primarily as a fire hearth, although the feature soil was so wet that some charcoal might have already disintegrated, or the feature may represent a portion of a now buried house floor. In any case, the location of the feature in what is now a wetland suggests that during the Middle Archaic period, it may have been drier, and that may be one reason why Middle Archaic sites are so rare: many of them are now underwater!

The Middle Archaic portion of the Leicester Flats site is an extremely important contribution to our shared past. Hopefully, more site discoveries, aided by the knowledge gained from the study of this site, will tell us even more about the mysteries of Native Americans living in Vermont during the Middle Archaic period.

THE LATE ARCHAIC PERIOD

The Late Archaic Period began around or just after 6,000 years

How do we know the age of sites?

Archaeologists can tell the age of a site from the charcoal they find there. This technique is called Carbon-14, C-14, or radiocarbon dating.

Carbon-14 is a radioactive form of carbon that is found naturally in the atmosphere. Don't worry, it won't harm you! Every living thing absorbs C-14 from the air. When the living thing dies, such as when a tree is cut down, or an animal killed, the C-14 absorbed during its life begins to break down at a regular rate.

Archaeologists rely on chemists and physicists and their specialized equipment to calculate how much C-14 has broken down in a particular sample recovered from an archaeological site, such as charcoal. When this is known, archaeologists can roughly determine when the tree that the charcoal came from died, and therefore the estimated age of the feature where the charcoal was found.



Late Archaic Period

Time: Approximately 6,000–3,000 calendar years before present.

Environment: Temperatures during the Late Archaic period were warmer than in previous periods, and warmer than they are today and precipitation increased. These factors combined to produce a time of abundance in Vermont. Fruit and nut-bearing trees grew, and other nutritious plant resources sprang up, along with habitats for a range of new animals.

Tools: Archaeologists sub-divide the Late Archaic period in Vermont, based on different and distinctive projectile points, and tool collections. These include: Otter Creek, Vosburg, Brewerton, Normanskill, Susquehanna, and Orient, among other regionally projectile point forms. A variety of both groundstone and flaked stone tools were made and used during the Late Archaic period.

Food: People of the Late Archaic period in Vermont utilized a wide variety of plant and animal resources. They became very well-adapted to the environment and the various beneficial plants and animals located in different environmental zones.

ago, and lasted for approximately 3,000 years. Temperatures began to get much warmer during this period—warmer than it had been at any time since the Ice Age. It may have been slightly drier as well. The summers were long and mild, even hot, and the winters became shorter with less intense cold than before. Oak-hemlock and oak-hickory forests expanded with the warmer climate and fruit and nut-bearing trees began to grow in the region. Shrubs and other nutritious plant resources also sprang up in abundance. Obviously, the warmth and wealth of plants brought in a greater variety of animals as well. All in all, it was a time of plenty in Vermont, and this natural bounty led to a great

expansion of Native American populations and cultures.

A great deal of archaeological evidence shows advancing *technology* in the Late Archaic period, particularly specialized hunting and gathering. Also, far more archaeological sites dating to one or another portion of the Late Archaic period have been identified in the state than from any previous period. Either more people lived in Vermont during this period or Late Archaic period sites are just located in areas where archaeologists are more likely to find them. Both factors may be responsible for the increased number of sites we find from this period.

Archaeological sites in other areas of the Champlain Valley show that Native Americans were hunting and collecting a variety of animal and plant foods during this time. Clearly they had a keen sense of their natural surroundings. Some archaeologists even think that by the Late Archaic period, people were coming to live together in larger communities, at least for part of the year. These communities may have pooled their resources and divided hunting and foraging tasks among themselves.

No matter how closely or how often they chose to live in larger groups, archaeologists know that Native Americans of the Late Archaic period spread out farther than ever before. Late Archaic period sites have been found in all areas of Vermont, from the shores of Lake Champlain to the tops of the Green



Fragmentary Otter Creek projectile point recovered from site VT-RU-573 in Salisbury.



Mountains. Native Americans thrived during this time, and archaeology is the science that proves this for all of us.

VELCO NRP Late Archaic Sites

The archaeological excavations conducted for the VELCO NRP identified a number of Late Archaic sites. Most were very small, or consisted of only a single projectile point that matched a datable style. Several sites are more important for our understanding of the Native Americans of the Late Archaic period in Vermont.

One of the most important Late Archaic sites found by archaeologists belongs to what is called the *Vergennes Phase* or the earliest portion of the Late Archaic period. Site VT-RU-573, located in Brandon, Vermont, is perched on a small terrace overlooking a stream, which flows into the Otter Creek a short distance away. There excavation teams uncovered a camping site with many artifacts and features that likely represent fire hearths or refuse pits. Archaeologists found side-notched *Otter Creek*-type projectile points at the site that tell us people were there during the Vergennes phase.

While sifting through ancient layers at the site, excavators discovered numerous flakes of all sizes and shapes, as well as *cores*, indicating that stone tool production was a major activity for the Native Americans living there, or that people lived there for quite a while. Archaeologists also discovered an amazing, large cache of cores and unworked quartzite cobbles and boulders at the base of a single feature. The find—totaling 151 pounds of stone—suggests the site was probably a winter encampment. Here is how 151 pounds of stones led to this conclusion. In spring, summer or fall, the rocks would have been visible on the ground and easily movable. In the winter, however, the stone would likely have been covered over with snow and frozen in place, making it very hard to find and even harder to move. So the collection of many stones in one place leads archaeologists to think that Native Americans spent winters at site

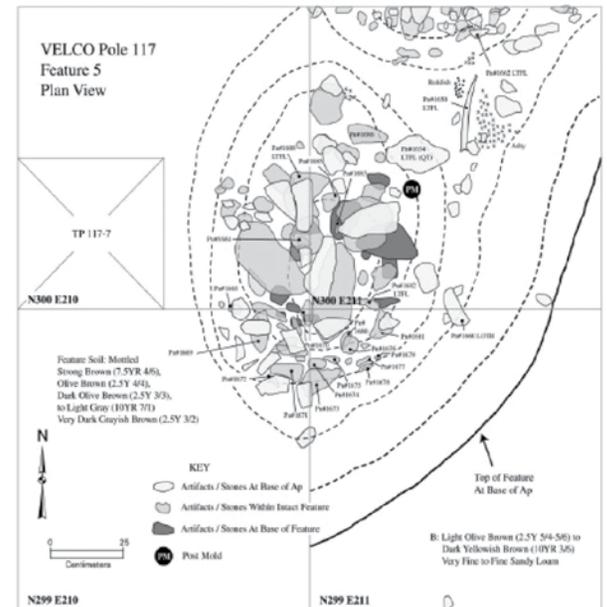
VT-RU-573. In addition, in order for the stone to have been accessible throughout the winter, archaeologists think that the feature was located in the interior of a house, safely buried in the floor.

This site provides archaeologists with rare evidence of Native American winter camping strategies during the Late Archaic period, and helps to show how important the Otter Creek and the small streams that feed it were to people during the Vergennes phase. After the excavations were concluded, VELCO engineers changed the location of the utility poles to completely avoid the site and preserve it for the future.

Site VT-AD-1388 dates to the more recent end of the Late Archaic period, some 2,500 years later. It was found in Salisbury, Vermont, just off of Route 7, next to a



Above: Crew members excavating large, quartzite-filled cache feature at site VT-RU-573 in Salisbury. Below: Illustration of quartzite cache.





A view of the Otter Creek during the spring floods.

small wetland that was likely much larger in size. An *Orient Fishtail*-type projectile point was recovered from within a feature identified at the site, confirming its age. Orient Fishtail points get their name from their fishtail-like base and from a site in a town called Orient on Long Island in New York.



Transitional Archaic (Orient) feature excavated at site VT-AD-1388 in Salisbury.

The feature found at site VT-AD-1388 was quite large and its walls were baked red by intense heat. Excavators also found large stones and fire-cracked rock in the feature. All of this evidence suggests that Native people made a cooking hearth there more than 3,000 years ago. They may even have used it as a roasting platform to prepare meats or nuts. Within the feature, archaeologists found a

number of flakes, tools and cores, suggesting that Native Americans made stone tools at the site and used them for variety of tasks, including cutting, scraping and hunting. One excavation team also found a large quartzite core at the bottom of the feature suggesting that, like site VT-RU-573, Native Americans gathered quartzite and brought it to the site to be worked later.

For most of the Late Archaic period, archaeology tells us that there were many Native Americans living all over Vermont. By the end of the Late Archaic period, however, during the period when site VT-AD-1388 was occupied, sites become much rarer in Vermont. That is why the discovery of site VT-AD-1388 is so important for our knowledge of Vermont's past. While this discovery makes us wonder whether more sites just haven't been found yet, some kind of population reduction seems much more likely, especially because Native American sites from the next period in Vermont's prehistory, the Early Woodland period, are fairly rare.

Archaeologists and other scientists know that towards the end of the Late Archaic period temperatures dropped and became cooler again. Many of the trees and shrubs that thrived during the previous period's warmer temperatures, such as some of the fruit and nut trees, may have died out from the cold. This probably meant that fewer of the resources people depended on were available. In addition, the colder climate may have prevented Native Americans from living in as many areas as they did before. In fact, after 2,500 years ago, it seems that Native Americans preferred not to live in the higher elevations of Vermont and spent nearly all of their time in the warmer river valleys.



Orient Fishtail projectile point recovered from feature at site VT-AD-1388 in Salisbury.



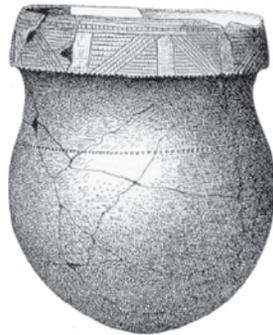
THE WOODLAND PERIODS: EARLY, MIDDLE AND LATE

The final periods of Native American occupation before Europeans entered the region are known as the Early, Middle and Late Woodland periods. The Early Woodland period in Vermont began about 3,000 years ago, and the Late Woodland period ended about the time of European contact, usually rounded to A.D. 1600.

At the beginning of the Early Woodland period, the climate of Vermont was colder than it is today and colder than it had been during the previous Late Archaic period.



Trees and nutritious plants that had been available for centuries became scarcer because of the slightly colder temperatures. Over the span of the Early, Middle and Late Woodland periods, however, temperatures eventually warmed up to where they are today.



Over the course of the Woodland periods, Native American populations grew and developed major advances in technology. The Early Woodland period saw the introduction of clay pottery and the bow and arrow. The introduction of pottery not only changed how Native Americans stored and prepared their food, it is also helpful to archaeologists because the changing styles and manufacturing techniques provide a good way to date sites. As far as archaeologists can tell from excavated sites, Woodland sites also provide the best view of other aspects of Native American life, such as the way their communities were organized and some aspects of their religion. By the beginning of the Late Woodland period, about 1,000 years ago, Native Americans in this area had begun to cultivate plants and practice *agriculture*.

This means that they started farming by planting crops nearby instead of relying solely on patches of wild or tended plant foods in different locations.

THE EARLY WOODLAND PERIOD

The first of the Woodland periods, called the Early Woodland period in Vermont, is not very well understood by archaeologists. Native American populations appear to have declined a bit toward the end of the Late Archaic Period and this seems to have continued throughout the Early Woodland period. Fewer sites date from this time period and they almost always are found very close to major sources of water. The sizes of the sites appear to get smaller as well, at least those that have been found in Vermont. The population question is still somewhat of

Early Woodland Period

Time: Approximately 3,000–2,100 calendar years before present.

Environment: Temperatures grew colder in the Early Woodland period. Nutritious nut trees and food plants appear to have become scarcer. Populations also appear to have decreased.

Tools: The most common projectile point used in Vermont during the Early Woodland period is the Meadowood type, but Adena-type projectile points are also known from Vermont. Early Woodland habitation sites and tools show that people adapted to the changing environment. The discovery of cemeteries from this period gives us an indication of their rich culture and beliefs. Pottery was first made and used in the Early Woodland period. The bow and arrow were first used during this period as well.

Food: More limited wild food resources caused the people of the Early Woodland period in Vermont to move out of the colder upland regions in favor of warmer wetter valleys where fish and other game were more plentiful.



a mystery to archaeologists, though changes in the environment are one likely cause. For reasons that are also not well known, Native Americans in the Early Woodland period moved out of many areas that had been populated during the Late Archaic period, and instead seem to have preferred living in lower, wetter river valleys.

Some archaeologists used to think that mound-building people from Ohio called “Adena” brought their culture to New England during the Early Woodland period. Most now think that the Early Woodland people in the north already had established ways of living before the Adena culture spread out of what is now Ohio. Either way, archaeologists know that Native Americans of the Early Woodland period were connected to people in Ohio and across Northeastern North America. They had vast trade networks that ranged from the Great Lakes to the Atlantic coast and from Labrador to the Gulf Coast. These networks appear to have been broader and certainly more diverse than those that have been reconstructed for earlier periods.

Other details about the complex and vibrant way of life of Early Woodland people comes from cemetery or burial sites. From these rare and important glimpses into peoples’ beliefs and cultural practices, archaeologists know that Native Americans during the Early Woodland period, like those



People began making pottery during the Early Woodland period using coils of clay.

before them, were spiritual people who were deeply connected to their ancestors and to Vermont. Fortunately, the archaeology done for the VELCO NRP

identified new sites that give all of us a chance to look at the everyday lives of the Early Woodland people.

VELCO NRP Early Woodland Sites

The archaeological surveys conducted for the VELCO NRP identified three Early Woodland period sites. Site VT-AD-55 and the Leicester Flats site are located directly across the Leicester River from one another. Native Americans used both sites during the Early Woodland period, although what they were doing appears to be quite different at each site.

The part of site VT-AD-55 that dates to the Early Woodland period is very small and is located on a small knoll in the middle of a swamp surrounded by the Leicester River. Archaeologists identified the site as Early Woodland in age when a *Meadowood*-type projectile point was recovered from a test unit. Importantly, the projectile point was made from Onondaga chert, from one of several sources located hundreds of miles away in Western New York or Ontario! Meadowood-type points are known for their small-size, narrow blades, and side-notched bases.

This site likely represents a small hunting camp, occupied for a very short time by one or two hunters. The hunters used a very finely made projectile point from exotic stone to hunt, which shows that high quality stone and high quality workmanship were important for what they



Meadowood-type projectile point recovered from site VT-AD-55 in Leicester.



were doing. The use of the finest stone available and the best equipment may have been an important part of preparing for a successful hunt.

Across the river, the Leicester Flats site contains evidence that Native Americans once visited and lived there for some amount of time during the Early Woodland period. This evidence came from a feature that was radiocarbon dated to the middle portion of the Early Woodland period. Although no food remains were discovered in the feature, archaeologists found a small fragment of pottery, confirming that early pottery was being made and used by the site occupants and that Native Americans probably used the feature for cooking.

The third Early Woodland site was found farther north near the junction of Route 7 and Route 125 in Middlebury. It was located in a swampy area near a stream called Beaver Brook, in a setting similar to site VT-AD-55. The excavated portion of the site was very small. Excavation teams found only a few flakes, several pieces of fire-cracked rock and a single small feature. Nevertheless, in the laboratory, researchers found tiny pieces of burned acorn, beechnut, butternut, hickory nut, and possibly black walnut in the feature soil. A sample of the beechnut was radiocarbon dated to the end of the Early Woodland period. Like site VT-AD-55, this site suggests that wetland areas were important to people of the Early Woodland period and also that nuts were actively collected and processed at special camps. Finding nuts in the feature also tells archaeologists that even though there may have been fewer nut trees, Native American knew exactly where they were!

These sites found along the VELCO NRP route, though small, help archaeologists understand the daily lives of people living in what is now Vermont during the Early Woodland period. Archaeologists know from these excavations that wetlands areas were important and that wild plants foods—especially nuts—were still being collected and specially processed. We know too that people were still forming hunting parties to collect game during the Early

Woodland period, like they had for thousands of years, even though their base camps were probably located closer to major rivers.

THE MIDDLE WOODLAND PERIOD

By the beginning of the Middle Woodland period, temperatures leveled off and soon began to rise. This returning warmth once again allowed a greater variety of plants and trees to grow in the area. And, like the plants and trees around them, the Native American populations appear to have grown in the Middle Woodland period as well.

Archaeologists believe that from around 2,100 to 1,000 years ago (100 B.C.–A.D. 1000), Native American populations expanded in valley areas—near ponds, rivers and along the shores of Lake Champlain—and also back into the forests and uplands of Vermont, just as their ancestors had.

During this period of time, Native Americans learned even more about how to harvest and use many different kinds of plants for food, medicine, and clothing. They also hunted and trapped a large variety of animals for pelts, for bone to make tools, and for meat. In order to successfully procure this variety of game, Native Americans of the Middle Woodland period developed special skills, techniques, and tools. Like the Early Woodland period people before them, the people of the Middle Woodland period made and used pottery with their own distinct and diverse decorations and styles. Perhaps even more interestingly, during the Middle Woodland period people began commonly making their everyday projectile points and tools of exotic stone from far away sources.

The use of exotic materials, once common during Paleoindian times, was rare during the Archaic periods. During the Middle Woodland period, however, people expanded trade networks that had emerged during the Early Woodland period. This could mean that trade routes probably started in the Early Woodland period, or perhaps even earlier, were flourishing by the



Middle Woodland Period

Time: Approximately 2,100–1,000 calendar years before present.

Environment: Temperatures began to warm again, and food resources and wild game again became more plentiful.

Tools: Projectile points, such as the Jack's Reef corner-notched type, were used widely in the Middle Woodland period. A wide variety of tools were employed for many specialized tasks. Once again, exotic stone became more popular for tool making in the Middle Woodland period, hinting at an expansion of well-established trade routes. Diverse pottery styles were made and used.

Food: Specialized groups harvested and hunted a large variety of plant and animal resources for food, clothing, and medicine.

Middle Woodland period, forming a network of Native American groups across what is now the eastern U.S.

VELCO NRP Middle Woodland Sites

Several Middle Woodland sites were identified along the route of the VELCO NRP. Again, the Leicester Flats site along the Leicester River in Salisbury was found to contain evidence of several Middle Woodland occupations, primarily in the form of several radiocarbon dated features. Archaeologists discovered that one feature, Feature #2, was unique at the site. Over several days, teams of archaeologists uncovered a semi-circular trench that contained some wood charcoal but appears to have been carefully filled in. Its purpose is not clear, but it may have func-

tioned as some sort of processing center or storage pit.

Researchers found feature #3 only a short distance from Feature #2. Scientists radiocarbon dated it to almost exactly the same time as Feature #2,

suggesting that the two were created and used at the same time. Feature #3 was very large and did not extend very far into the subsoil. Researchers think it might have been an interior floor of a small house. In the laboratory, archaeologists found six butternut fragments in a sample of feature soil, suggesting that the site was used by this group of Native Americans in the fall, and that nut gathering and processing were major activities at the site.

Excavation teams discovered another feature, designated Feature #39, which also dates to the Middle Woodland period, although it may not have been created at the same time as the other two. Like Feature #3, researchers found butternut fragments, a hazelnut fragment and one fragment that might be a walnut or hickory nut in a sample of soil from Feature #39, indicating it may have been a fire hearth of some kind. If the three features were all from the same visit, the way they are spread out suggests Native Americans established a fairly large fall encampment at the site during the Middle Woodland period. The features also could be from separate fall visits by the same groups or families over years or generations.

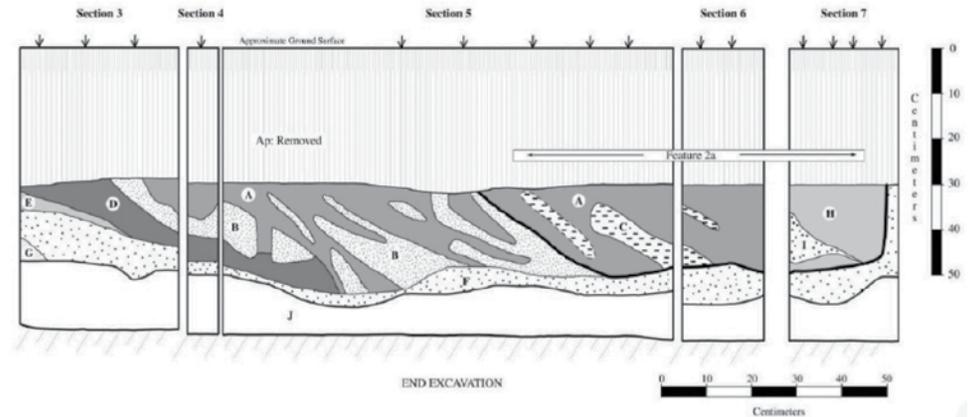


Illustration of Middle Woodland Feature #2 at the Leicester Flats site, VT-AD-127, in Salisbury. Charred beech wood recovered from this feature was dated to approximately 1,700-1,500 years ago.



At site VT-AD-1390, where archaeologists found deeply buried Early Archaic tools, teams also found, in layers closer to the surface, features and a *Jack's Reef Corner-Notched* projectile point that date to the Middle Woodland period, some 1,500 years ago. Jack's Reef-type points are known for their small, wide blade size and "corner-notching," hence the name. Much like the Leicester Flats site, both radiocarbon dated features at VT-AD-1390 contained butternut food remains, identifying yet another fall occupation. Archaeologists know that from the projectile point and *bifaces* they found, Native Americans also were hunting and making tools at the site.

Another site, VT-AD-1385, was found only a short distance to the north of the Leicester Flats site in Salisbury on a high terrace overlooking the Leicester River *floodplain* next to a seasonal *wetland*. Unlike the Leicester

Flats site and site VT-AD-1390, archaeologists discovered that site VT-AD-1385 was Middle Woodland in age when they found a number of pottery sherds with a type of decoration that was used only during the early part of the Middle Woodland period. Other than pottery, excavation teams only found a few pieces of fire-cracked rock at the site. Although the site is quite small and researchers found only a few artifacts, it nevertheless proves that small areas like wetlands, and the resources within them, were important to people during the Middle Woodland period. The site also contributes one more piece to the puzzle of past life that archaeologists continue to put together.



Jack's Reef Corner-Notched projectile point recovered from site VT-AD-1390 in Middlebury.



Archaeologists excavating at the Middle Woodland portion of site VT-AD-1390 in Middlebury.

THE LATE WOODLAND PERIOD

The Late Woodland Period, starting from around 1,000 years ago to the time of European contact, was arguably the most technologically advanced period of Vermont's Native American past. The temperatures remained steady or warmed slightly, and so the environment remained much like that of the previous period, and felt a lot like it does today. Foraging grew extremely specialized. Helped by the bow and arrow, Native Americans hunted a large variety of animals. They also used different technologies to catch fish and manage other resources. The use of pottery expanded and the decorations and styles changed. This included the creation of clay smoking pipes and tiny ceramic pots.

Archaeologists also know that, by the time of the Late Woodland period, Native Americans lived in larger groups around Lake Champlain, or in other valleys with good soils and good sources of water, at least in the warmer



Late Woodland Period

Time: Approximately 1,000 calendar years before present to the time of European contact, or approximately 1600 A.D.

Environment: The environment of the Late Woodland period was much like it is today.

Tools: The Late Woodland period probably represents the most technologically advanced period of Vermont's Native American past. The Levanna-type projectile point was used almost exclusively during this period, most likely to tip arrows. Many other tools were used for specialized tasks. Pottery was made and used regularly, including some elaborate forms. Perhaps most notably, Native Americans began to practice agriculture during the Late Woodland period.

Food: Native Americans collected a great variety of wild food resources and hunted many different small and large game during the Late Woodland period. Native American farmers grew and harvested plants like corn, beans and squash next to the rivers on floodplains.

months. From base villages, they would travel widely by land or canoe, collecting resources from a broad area to bring back to these larger communities.

During the Late Woodland period, along the Otter Creek floodplain and along the Winooski River floodplain, for example, Native Americans began to cultivate crops in and around their villages. They farmed corn, beans, and squash along the valley bottoms and at the mouths of rivers during the summer season. Archaeologists think that early agriculture resulted from communication with distant groups of Native Americans, where farming was first practiced. Knowledge about farming probably was passed through trade networks that linked the people of what is now Vermont with other cultures to the south. Plus, Native Americans had been plant experts for thousands of

years. Agriculture also takes more time, suggesting that people were living in the same places for much longer periods of the year to plant and harvest crops, although they probably still broke up into smaller family groups during the winter months.

Ultimately, by the time of the Late Woodland period, Native Americans were highly adapted to life in Vermont. They had developed many specialized technologies and beliefs that reflected the natural environment around them. It was this culture of Native Americans that the French explorer Samuel de Champlain first documented on his trip to the lake in 1609. Sadly, contact with Europeans also marked the beginning of new pressures and challenges for traditional Native American life in Vermont and the broader Northeast region.

VELCO NRP Late Woodland Sites

Archaeologists found sites dating to the Late Woodland period all along the VELCO NRP power line corridor. Most of these appear to be small hunting occupations or slightly larger camping areas. If the increase in the number of sites is any indication, both along the VELCO NRP and within Vermont as whole, Native American populations appear to have grown during the Late Woodland period. Researchers found a notable concentration of settlements at the current location of the Vergennes power substation, which is located in the northeast corner of the city of Vergennes. The area lies about five miles east of Lake Champlain along a small, unnamed brook that flows south into the Otter Creek just below the falls. Archaeologists excavated 157 square meters (1,690 square feet) and recovered over 14,000 artifacts



Levanna-type projectile point recovered from site VT-AD-1389 in Salisbury.



during three phases of field work at the site. Most of the artifacts they found were small flakes of quartzite left over from the manufacture of stone tools, such as arrowheads. Excavation teams found over 150 stone tool fragments at the site as well. Most of these tools are triangular arrow points, many of them broken during use or during the manufacturing process. Archaeologists call them *Levanna*-type points and date them to between about 800 and 1600 A.D. Levannas are known for their small size and triangular shape. Researchers found a small number of other artifacts indicating some small use of the site during the previous Early and Middle Woodland periods as well.

Although agriculture and decorated pottery are common features of Late Woodland sites, archaeologists did not find any evidence of farming or food storage at the Vergennes substation site. Instead, the location appears to be a place where hunters routinely stopped to camp, and make and repair weapons. By *sampling* the site with test pits, archaeologists discovered that artifacts were concentrated in five areas, each probably representing a different, short-term hunting camp. Excavators recovered a feature from one of these areas that appears to be the remains of a small cooking fire. Scientists radiocarbon dated it to near the time of European contact.

The Native Americans who used the site hunted in the Champlain Valley uplands, but their main camps were probably closer to the lake. The site provides an important glimpse into the seasonal activities associated with the area's first farming populations. While gardens were providing local Native Americans with an important new supplement to their diet, traditional hunting and plant foraging activities probably provided the bulk of their nutritional needs.

By the Late Woodland period, Native Americans in Vermont were also organized into the tribes Europeans encountered upon their arrival, principally the Western Abenaki. Although their ways of life changed dramatically after Europeans began to settle in the region, Native Americans nevertheless main-

tained their culture during this period while adapting to changes as they had for thousands of years.

NATIVE AMERICANS AFTER EUROPEAN CONTACT

From written documents, researchers have uncovered only small glimpses of what life was like for Native Americans living in Vermont in the first couple of centuries after European expansion into the region. For good reason, Native people kept to themselves or even hid their Native identity to protect themselves and their families from the Europeans who invaded their lands. The Thorpe Brook site is one that potentially provides a rare and important record of Native peoples' lives during the Contact period. People lived in a traditional way at the site, but also had access to European goods and ideas.

The site is located in Charlotte, on a terrace above Thorpe Brook not far upstream from where it empties into Lake Champlain. Archaeologists documented the remains of two early 19th-century structures at the site. The



Above: Levanna-type projectile points recovered from the Vergennes Substation site in Vergennes. Below: Feature excavated at the Vergennes Substation.





Edge of house structure at the Thorpe Brook site in Charlotte.

structures seem to represent simple log house constructions resting on earthen berms. Both earthen foundations had gaps that represent entryways or access to storage space beneath the buildings. Based on the presence of domestic, household type artifacts and a hearth base, researchers think the smaller of the two structures was a residence. The larger structure is interpreted as a workshop or storage building where the working and subsistence activities took place.

During the archaeological investigation of the Thorpe Brook site, excavators recovered nearly 1,100 historic period European-American artifacts and a small amount of stone tool manufacturing debris, which attest to the use of both European

and traditional materials at the site. The artifacts from the Thorpe Brook site include a high quantity of English pearlware-type ceramics and a small number of early transfer-printed whiteware sherds. All of these sherds tell scientists that the site was probably occupied sometime around 1840.

Excavators also found interesting artifacts that provide evidence for some of the activities that occurred on the site. These include a shoemaking tool called lasting pliers, a heavy iron wedge, an iron, hand-held rock drill, a fragment of a pie crimper, two metal buttons, a copper thimble, bottle glass and clay pipe fragments. The artifacts suggest that the site was occupied for quite

a while, and that site occupants did a variety of manufacturing and domestic activities around the home.

During the first half of the 19th century, the Thorpe Brook site was situated between the European-American population centers in Charlotte to the north and Ferrisburgh to the south. The location of the site, on Thorpe Brook near the lake, and the lack of any historic roads to the site, indicate that access to the site was primarily from the direction of Lake Champlain. This pattern of settlement, on the edge of the European-American population centers in Vermont's Champlain Valley, is typical of local Native American habitations in the first half of the 19th century. The semi-permanent nature of the structures at the Thorpe Brook site and the site's isolated location likely indicate that it was occupied by a family of Western Abenaki in the early 1800s.

Today, Native Americans still live in Vermont. They never left. As we have just showed you, Native Americans have been living in what we now call Vermont for more than 12,000 years. Archaeological research and Native American oral history both tell the story of the Original Vermonters and how they have adapted to environmental and social change over the course of more than 120 centuries. Archaeologists interpret these stories for all of us, and for people in the future.



Recovered from the Thorpe Brook site in Charlotte. Left: lasting pliers, copper thimble, spoon fragment and pipe bowl. Right: 19th Century ceramic fragments.



Chapter 5. Why is Archaeology Important?

From the time that Native Americans first entered Vermont up to the present day, a period over fifty times longer than the history of the United States, great changes took place. The glaciers retreated and melted. The biggest of Earth's mammals went extinct. The Champlain Sea became a lake. Rivers formed and dried up. Forests rose up, fell, and rose up again. Yet, through all of Vermont's environmental changes, Native people were—and still are—living their lives and caring for their families here. Just like today's Vermonters, the Original Vermonters did this by adapting to the environment and by developing special techniques and tools to help them get the food and the comfort needed for survival.

Archaeologists, and now *you*, know that Vermont has been a very important area for Native Americans at almost every point since the end of the last Ice Age. Through this summary of our shared archaeological past, you have learned that Native Americans used what is now Rutland, Addison, and Chittenden Counties extensively for hunting game. The projectile points, fire pits, and other evidence left by the Native Americans, and the relationship of artifacts and features in the ground, tell us that this is so.

At certain periods of the past, the VELCO NRP power line corridor and areas nearby were also used by Native Americans for a variety of other purposes as well. It appears that the location of the corridor, which crosscuts the foothills and lowlands between the Green Mountains and the lake, provided a good place to gather nuts and other seasonally available plant foods. Certain places like the Leicester Flats site appear to have been regular stops for thousands of years on peoples' annual travels between the mountains, the major rivers and the lake. Surely, fishing was critically important along the rivers too, but much of the evidence for it, including nets, hooks, and fish bones, rarely preserves to be studied by archaeologists.

Although almost none of the clothing, baskets and other organic items that the Native Americans made and used have preserved either, archaeologists can still discover and reconstruct what life was like in Vermont at different points in the past. The science of archaeology uses the evidence that is still available to us, plus the important context for this evidence, to write the story of how Native Americans made their living during different periods of time. This is how any science works. And like any other science, there is always more to learn.

Now you know a lot about Vermont's Native American past, but this is not the whole story. Many chapters remain to be written about the archaeology of Native People in Vermont. With more sites, more information and more study, we can all learn much more about our state's human heritage. In fact, twenty years from now, you can bet that we will know much more than we do today about these native people, the Original Vermonters.

The knowledge gained from archaeology, however, depends on one very important thing. We all must care for the archaeological resources that we have in Vermont. Archaeological sites are fragile and very rare, and once they are gone, they are gone forever. As you have seen, each site has its own story to tell, in its own way, about the people who once lived here.





RESOURCES FOR MORE INFORMATION ON NATIVE AMERICANS LIVING IN VERMONT TODAY

- Abenaki Nation of Mississquoi www.abenakination.org
100 Grand Ave., Swanton, VT 05488 — 802.868.2559
- Abenaki Tribal Museum & Cultural Center www.abenakination.org
100 Grand Ave., Swanton, VT 05488 — 802.868.2559
- Vermonters Concerned on Native American Affairs www.vcnaa.com
- The Abenaki Language www.cowasuck.org/language
- Vermont Commission on Native American Affairs vcnaa.vermont.gov
- Western Abnaki Dictionary & Radio Online westernabenaki.com

RESOURCES FOR MORE INFORMATION ABOUT ARCHAEOLOGICAL RESEARCH IN VERMONT AND OTHER STATES

VERMONT ARCHAEOLOGY

- Vermont Archaeology Museum 173.201.93.108/vtarch
- The Vermont Archaeological Society www.vtarchaeology.org
P.O. Box 66, Burlington, VT 05402-0663
- Vermont Division for Historic Preservation www.historicvermont.org
National Life Bldg., 6th Floor, Montpelier, VT 05620 — 802.828.3211
- Lake Champlain Maritime Museum www.lcmm.org
4472 Basin Harbor Road, Vergennes, VT 05491 — 802.475.2022
- Chimney Point www.historicvermont.org/chimneypoint
State Historic Site

REGIONAL AND NATIONAL ARCHAEOLOGY

- Eastern States Archaeological Federation www.esaf-archeology.org
- Society for American Archaeology www.saa.org
900 Second Street NE #12, Washington, D.C.
- Society for Historical Archaeology www.sha.org
9707 Key West Ave., Suite 100, Rockville, MD 20850
- OTHER WEB SITES
- Robert Full Fleming Museum www.uvm.edu/~fleming
- University of Vermont www.uvm.edu/~uvmcap
Consulting Archaeology Program
- Archaeological Services at the University of Massachusetts, Amherst www.anthro.umass.edu/~archserv
- Vermont Historical Society www.state.vt.us/vhs





Adapt (Adaptation)—To change behavior or practices to suit a new condition or environment.

Agriculture—Farming; cultivating; raising one or more plant crops. In Vermont, Native Americans grew corn, beans, and squash during the Late Woodland period, after about A.D. 1000.

Analysis—In this case, a careful study of a site by examination of each individual artifact and/or feature and the context in which it was found to get the most information possible from each artifact and each site.

Archaeologists—People who study or practice the science of archaeology; people who study past human cultures.

Archaeological Culture—A general way of life shared across a region during a particular period of the past. As opposed to a living culture, archaeological cultures are defined by what preserves to be studied and are typically based on a grouping of archaeological sites of similar age that contain similar types of tools and reveal similar environmental adaptations.

Archaeology—The study of past peoples through excavation, recovery and analysis of their material culture and the settings in which they lived. Not to be confused with paleontology, or the study of the fossil record including dinosaurs.

Artifact—In this case, anything that was made and left behind by Native Americans that can be picked up and transported.

Atlatl—(pronounced ät'lätul) A word from the Nahuatl language (spoken by the Aztecs) for a throwing stick about as long as a human forearm. It is thought to have been used by the Native Americans as early as the Early Paleoindian period, and its use continued until the adoption of the bow and arrow, and in some cases afterward. General designs included a handle on one end and a hook on the other. The end of a spear-shaft would have been hooked onto the atlatl and when the spear was thrown, the thrower would let go of the spear while still continuing to maintain the throwing motion with the atlatl. This would increase the speed and accuracy of a spear greatly, and enable, for example, a hunter to spear their prey more quickly and easily.

Bifaces—chipped or flaked stone tool that has been worked on both of its sides, or faces.

Brewerton Projectile Point Type—A Late Archaic period projectile point type produced during the Vergennes Phase in Vermont (ca. 5,000-4,500 cal yr BP).

Bifurcate-Based and Swanton-Corner-Notched Projectile Point Types—Two prominent Early Archaic (9,500-7,500 cal yr BP) projectile point types found in Vermont.

Champlain Basin—The valley area straddling much of eastern New York and western Vermont formed by glacial lakes, the Champlain Sea, and finally the Lake Champlain.



Champlain Lowland—The hills, plains and valleys that lie between the Green Mountains and Lake Champlain on the eastern side of the Champlain Basin.

Chronology—A series of events arranged by time in the order that they occurred.

Clovis—Medium to large-sized, fluted projectile point with in-curved base characteristic of the Early Paleoindian period (ca. 9500-8500 B.C.). Named after Clovis, New Mexico, where the type was first defined. Clovis points have been found throughout North America suggesting that early colonists across the continent shared a common ancestry.

Context—The relationship within a site in space and time between artifacts, features and environmental evidence within a site and the location of that site within its local and regional environment.

Core—A partially reduced mass of stone from which Native Americans produced flaked-stone tools.

Cormier/Nicholas Projectile Point Type—A pentagonal lanceolate projectile point type produced during the earlier portion of the Late Paleoindian period (ca. 11,200-9,500 cal yr BP) in Vermont.

Cultural Remains—Evidence of past human behavior that preserves to be studied by archaeologists.

Cultural Resource—Something from which we can gain new information or a better understanding of human history. For example,

archaeological sites that pass from one generation to another are cultural resources that help educate people about past human behavior, the evidence of which preserves in the ground, can be studied by archaeologists, and can teach us about human history.

Culture—The language traditions, habits, techniques, ideas, beliefs, ways of living, and many other things that are practiced by a particular group of people, and passed on through successive generations.

Curation—The long term storage of materials and information. For archaeological information, this includes storage of artifacts and paper records in non-degradable, acid-free boxes in temperature controlled rooms and digital data on computers and servers.

Distinct—Different or individual, recognizable from others.

Environment—For the purposes of this book, the word environment refers to the past and/or present natural world within Chittenden County, the state of Vermont, or the entire planet. The environment includes things like plants, trees, animals and micro-organisms, rivers, streams, lakes, and oceans, the soil, rock, climate, temperature and many other things that the natural world is made of.

Estimate, estimation—An approximate calculation; an educated guess. Evidence; clues or cultural remains such as artifacts, features and their context that can be interpreted by archaeologists and help us better understand how people lived in the past



Excavation—In archaeology, excavation refers to the careful, measured digging that trained scientists do in order to dismantle and record archaeological sites.

Evidence—Something that provides proof.

Exotic—In this case, exotic means not local as in the case of a type of stone that is found in a site far away from the natural origin of the stone. For example, site VT-CH-197 was discovered in Williston, VT, but contained stone that naturally occurs only at Munsungan Lake in Maine. Stones from Maine are considered exotic when found in Vermont by archaeologists.

Extinct—A formerly living thing that is no longer in existence. For example, a species of animal, like the woolly mammoth, that once lived in North America but died off in the past.

Faunal Remains—Animal bone. In Vermont, due to the acidic soil, animal bone doesn't preserve very well unless it has been burned, such as in a fire hearth.

Feature—In this case, anything left behind by Native Americans that cannot be moved without destroying it, such as the remains of a fire pit or rock carvings on a cliff side.

Flaked Stone Tools—Tools that are made with special kinds of stone by carefully chipping off pieces, called flakes, in order to give them shape. Stones like chert and quartzite were specifically chosen by Native Americans because they break along even, smooth planes-like glass.

Tools made with glassy stone and the flaked stone technique were important because they could be made to have very sharp edges.

Flakes—Variably sized pieces or chips of stone, produced in the process of making flaked stone tools. Most flakes were discarded by Native Americans though some of the larger ones were often used as knives or made into other stone tools.

Floodplain—Land adjoining a waterbody that is covered by water during flows or water levels reached at the annual high-water stage.

Fluted—A grooved channel in Early Paleoindian period projectile points. These channels run vertically up the center of the point from the bottom and likely were made to make it easier to attach the point to the spear shaft.

Foraging—The search for edible or usable plants—for use as food, medicine, etc.

Fossil—The remains of an ancient plant or animal that have turned to stone.

Game—In this case—prey; animals that are hunted.

Glaciers—Huge sheets of ice, rising up to a mile high. During the last ice age (up to about 14,000 years ago), glaciers covered much of the Earth's surface, including what is now Vermont.



Groundstone Tools—Tools that Native Americans made by pecking and grinding a stone to produce a desired shape and function. For example, axes, gouges and stones used to process plants and nuts.

Historians—People who study history or the period of the recent past for which there exists written records.

Haft—The handle of a weapon or tool.

History—The study of the past through the writings of those that recorded the events of their time.

Hypothesize—The act of creating a hypothesis or making an educated guess to guide research or interpret scientific data.

Ice Age—In this case, the time during the end of the Pleistocene Epoch between about 20,000 and 12,000 years ago, when the Earth was much colder than it is today, and glaciers covered all of northeastern North America.

Intensive—An increased amount of activity relative to areas around it. Intensively occupied sites exhibit high densities and volumes of artifacts per square meter.

Interpret (Interpretation)—To piece together clues to arrive at an understanding of something; to explain the meaning of.

Jack's Reef Projectile Point Type—Medium sized, broad, thin, comer-notched projectile point characteristic of the Middle Woodland

period (ca. 2,100-1,000 cal yr BP). Named after a site in Onondaga County, central New York.

Laurentian Tradition—Generally related to Late Archaic period archaeological cultures in northeastern North America linked by the use of similar types of stone tools and similar adaptations to local environments. The Laurentian Tradition is divided into regional phases (e.g. the Vergennes phase).

Levanna Projectile Point Type—Small to medium sized, triangular projectile point associated with Middle and Late Woodland period sites in Vermont (ca. A.D. 750—1600). Probably used to tip arrows.

Mammoth—Extinct hairy elephant with large tusks that lived in North America until just after the end of the last Ice Age. Hunted by humans during Paleoindian times.

Mastodon—Another species of extinct elephant that lived in North America until just after the end of the Ice Age. Hunted by humans during Paleoindian times.

Material Culture—Objects/items used by people; the particular tools, art, clothing, and any other visible items used by a particular culture. Archaeologists attempt to piece together past people's way of life using the material culture that preserves to be studied.

Meadowood Projectile Point Type—Medium-sized, thin, side-notched projectile point associated with Early Woodland period sites



(ca. 3,000-2,100 cal yr BP) across a broad portion of the northeastern U.S., including Vermont.

Microorganisms—In this case, very small living things that live in the soil.

Migrate—In this case, when groups of animals move to different locations, often with the seasons, to search for available food or water.

National Register of Historic Places—A list of the most significant archaeological sites and historic buildings in the United States.

Native American—Equivalent to historically used term “Indian,” a person whose ancestors lived in North, Central, or South America before the arrival of Europeans and other non-native peoples.

Neville and Stark Projectile Point Types—Two Middle Archaic (7,500-6,000 cal yr BP) projectile point types recovered from Vermont archaeological sites.

New World—A term used to describe North and South America, or the Western Hemisphere. Europeans thought they were the first to discover this part of the world, but Native Americans had found this “new world” thousands of years before!

Nomad (Nomadic)—In this case, people who have no permanent home, but rather, move with the game that they are hunting, with the seasons, and/or to harvest different plants at different times of the year. Often, this movement occurs within fixed territories.

Non-renewable Resource—Any resource, in this case cultural, that can never be replenished. Unfortunately, the people of the past can never come back and tell us how they were living, or create more sites for archaeologists to find. Archaeological sites are very rare, and when they are gone, they are gone forever. That is why we must do everything we can to preserve evidence of the past.

Normanskill Projectile Point Type—A Late Archaic projectile point type produced during the River Phase (4,500-3,800 cal yr BP) in Vermont.

Otter Creek Projectile Point Type—Large-sized, thick narrow, side-notched projectile point. Named after the Otter Creek in west-central Vermont where this type of spearpoint has been recovered from Late Archaic period sites (ca. 6,000-4,500 cal yr BP).

Orient Fishtail Projectile Point Type—A projectile point type that dates to the latest portion (often called the ‘Transitional Archaic’, ca. 3,300-3,000 cal yr BP) of the Late Archaic period in Vermont.

Paleobotanical Remains—The remains of ancient plants, often preserved in fire pits or other features left by Native Americans because they were burned and turned to charcoal.

Paleoindians—The first people to enter the New World at the end of the last Ice Age. The first Vermonters were Paleoindians and they arrived about 12,500 calendar years ago.



Paleontologist—A scientist who studies the fossils of animals, including, fish, mammals, and reptiles such as dinosaurs.

Phase I Survey— The first stage of a three-stage process used in archaeological research. This step focuses on identification, and is used to determine whether there are archaeological sites in the study area.

Phase II Survey— The second stage of a three-stage process used in archaeological research. This step focuses on evaluation, and is used to determine whether the importance of sites identified in Phase I.

Phase III Survey— The third stage of a three-stage process used in archaeological research. This step focuses on mitigation, and is used to determine what to do with the sites studied in Phase II.

Point Typology—A term used to describe the way archaeologists identify different periods and cultures of Native Americans by the distinctive shapes and styles of projectile points they made and used.

Pre-Contact—In this case, the time before Europeans came to the New World.

Prehistory—The period of the past before written records, typically studied through the science of archaeology. In this case, the word means pre-Contact, or before Native Americans were contacted by Europeans.

Preserve (Preservation)—The act of keeping something from harm, misuse, or destruction. In this case, the act of caring for artifacts and features, their contexts, and whole sites to protect the knowledge that

can be gained from these things for the scientific community and the general public. It also refers to the durability of certain artifact types. For example, stone preserves well in the ground, but wood does not.

Projectile Point—Tool that was primarily made by flaking stone. Projectile point is a general term that describes both spear points and arrowheads, or any other tool that was hurled or thrust through the air for the purpose of hunting.

Radiocarbon Dating—A process by which a machine counts how much of Carbon 14 remains in a formerly living piece of plant or animal. When living, the plant or animal absorbed C-14 at a constant rate from the atmosphere and, when it died, it stopped absorbing C-14. Because C-14 breaks down a predictable amount every year, scientists can figure out when the plant or animal died by measuring how much C-14 is left in it (and therefore how old it is and things associated with it are).

Records—Paper notes, photographs, maps, documents and data that detail the excavation of a site and help preserve the context and specific details of sites, artifacts and features long after they have been excavated or otherwise destroyed.

Regional—Within a specific environmental or geographical area. In this case, northeastern New England, Vermont and Chittenden County are considered specific regions.

Resources—Naturally available animals, rocks, plants, water, soils. Things necessary for survival.





Saint-Anne/Varney Projectile Point Type—A thin, well-flaked, lanceolate projectile point type produced during the later portion of the Late Paleoindian period (ca. 11,200-9,500 cal yr BP) in Vermont.

Sampling—Archaeologists often do not need to excavate entire sites to learn about them. Instead, they often use “sampling” or smaller excavations placed at regular intervals to understand the layout and significance of a site.

Scraping Tools, Scraper—A fairly simple stone tool used by the Native Americans; scrapers usually have one broad sharpened end used for processing meat, flesh, or wood.

Sedentary—Remaining in one area, region or locality; not nomadic or migratory.

Semi-Nomadic—Refers to people that have no permanent, fixed home, but move less frequently than nomadic people, perhaps seasonally or yearly within regional territories.

Shaft—In this case, a sturdy, rounded, straight, narrow piece of wood such as a spear or arrow that a projectile point would be attached to for the purpose of hunting game.

Sherd—Broken pieces of pottery found in sites and often used by archaeologists to identify dates and cultures.

Site—In this case, a location where Native Americans lived, camped or worked at some point in the past and where evidence of their activities preserves and can be recovered through archaeology.

Site Grid—An invisible “checker board” of one meter squares placed over a site and used to measure and record distances between excavation pits and units, artifacts and features.

Specialize (Specialization)—To adapt, or change to live in a specific environment; to become more focused and efficient as in the case of Native American hunting, fishing, or plant collecting techniques.

Stark (and Neville) Projectile Point Types—Two Middle Archaic (7,500-6,000 cal yr BP) projectile point types recovered from Vermont archaeological sites.

Stratigraphy—A term in archaeology and geology that refers to natural or human-made layers of soil.

Susquehanna Projectile Point Type—A projectile point type produced during the later portion of the Late Archaic period (3,800-3,300 cal yr BP) in Vermont.

Technique—A special skill or way of doing things or that enables one to perform a task or job.

Technology—Tools or inventions that are created to solve a problem or set of problems. Overtime, Native American tools and inventions





changed to meet the challenges of changing environments and social conditions.

Transit—A surveying instrument used by archaeologists to measure out straight lines and guide the excavation of archaeological sites.

Vergennes Phase—A Late Archaic period archaeological culture (ca. 5,600-4,500 cal yr BP.) centered along Otter Creek and Lake Champlain in western Vermont and characterized by the use of groundstone tools and side-notched projectile points like the Otter Creek type.

Vosburg Projectile Point Type—A Late Archaic projectile point type produced during the Vergennes Phase in Vermont.

Waterway—A path or channel for flowing water.

Wetland—Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.
