

Mallett's Bay

An Introduction to  
**VERMONT ARCHAEOLOGY**

NATIVE AMERICAN ARCHAEOLOGICAL SITES  
and the  
CHITTENDEN COUNTY  
CIRCUMFERENTIAL HIGHWAY



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# VERMONT ARCHAEOLOGY

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AND THE

CHITTENDEN COUNTY

CIRCUMFERENTIAL HIGHWAY

CCCH ROUTE

White Champlain

THE LAKES

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2003

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## Chapter 1. What is the CCCH?

**T**he *Chittenden County Circumferential Highway* is a mouthful to say and even harder to write. So, from now on, we will call it the **CCCH**. The CCCH is a major road building project in Chittenden County. This "circumferential" or circular highway will run around Burlington, Winooski and South Burlington, through the towns of Williston, Essex, and Colchester. It will help reduce traffic on busy neighborhood streets and offer better access to certain areas around Burlington.



A section of the CCCH today.

It's a big job to create a highway. Of course, the construction is a huge task by itself. However, it also takes years of planning to design a highway that will suit the needs of the communities it passes through, and the needs of the people using it. Planners also work very hard to protect the *environment* around the highway. Part of that planning involves identifying, and learning from the *cultural remains* of the past, *preserved* in the ground, before they are lost forever in the highway construction. This is the science of *archaeology*. This is part of what *archaeologists* do.

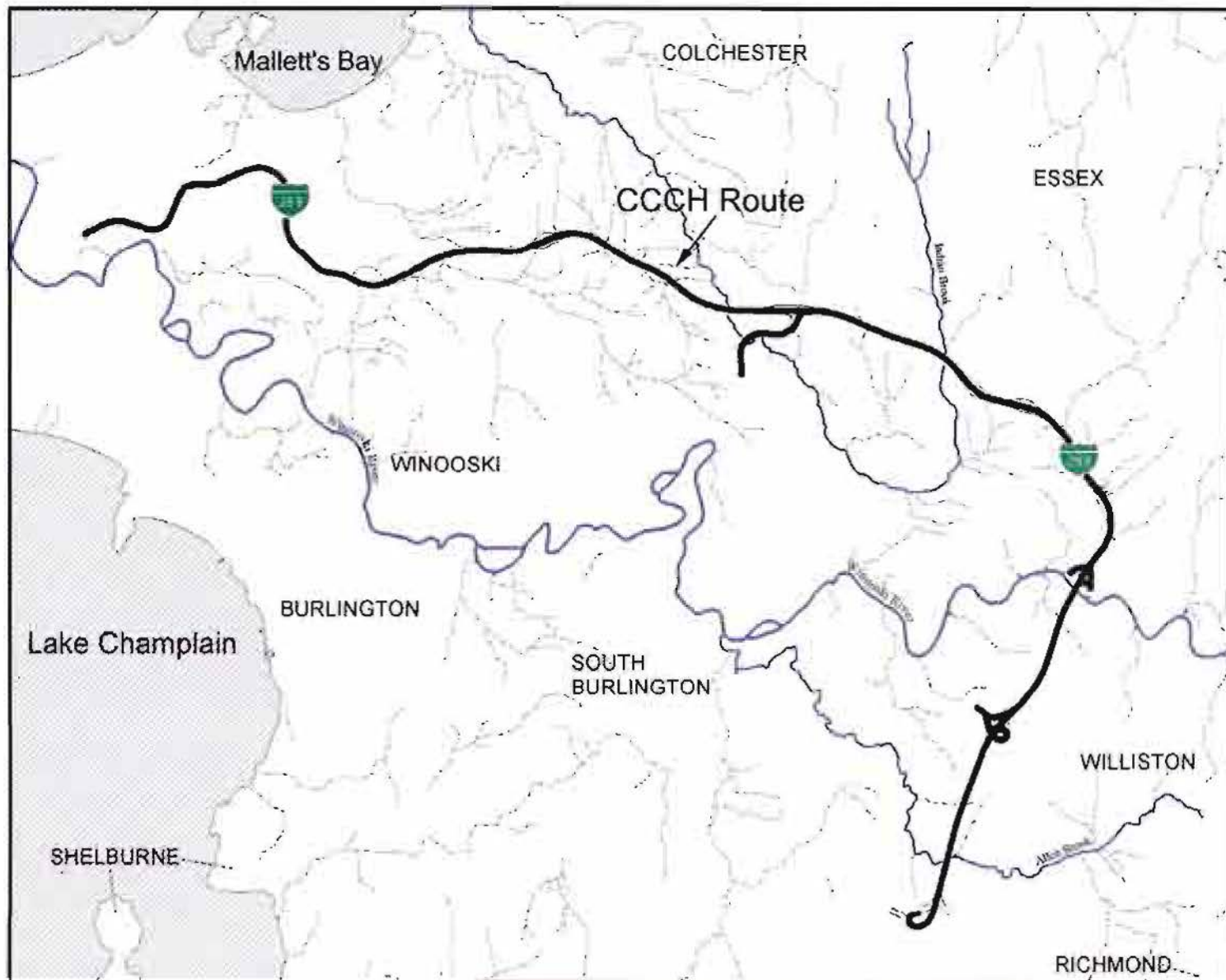
Who were these groups of people that lived in Vermont in the past and what was their *culture* like? Vermont was made a state in 1791, but, even years before that, European settlers came into this area to start new lives. Revolutionary War battles were fought on this land and naval

battles were waged on Lake Champlain. Yet, did you know that long before any of these things occurred, 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 what is now Chittenden County. They were the original Vermonters.

### Important Note:

The words in **bold and italics** have definitions in the Glossary, located in the back of the book. These definitions will provide more information to help you understand these important terms.





More than 11,000 years ago, as far back as the time of the *Paleoindians* (the first people to enter the *New World* after the last great Ice Age), Native American groups lived and moved around in the area we now call Chittenden County. 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. They learned to make good use of Lake Champlain, the ponds, the streams, the forests, the fish, the game (hunted animals) and many other natural resources that people in Vermont still need and enjoy today. They hunted, trapped, and fished. They gathered wild plant foods, built shelters, and raised families. In short, these past people led rich lives for many thousands of years in the same areas that are now the towns in which we live.

Throughout this book, you will learn about these ancient Vermonters. Specifically, we will show you many interesting things about the people who were living in Chittenden County and other areas of Vermont. You will learn about how Vermont's environment changed in the past and how the Native Americans *adapted* to these changes 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 CCCH. More importantly, you will learn what these sites have already told us about the unwritten chapters of Vermont history, and will continue to tell us in years to come. Finally, this book will tell you how archaeology and the careful preservation of archaeological sites is important for all of us and for people in the future.



Map of Vermont. Chittenden County highlighted in green.

So Let's begin...



## Chapter 2. Vermont's Archaeological Past



Caribou were likely hunted in Vermont's archaeological past.

**F**ifteen or sixteen thousand years ago, North America looked and felt a lot 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 landscape made food for all living creatures hard to come by.

At that time, in what is now the continent of Asia, groups of hardy people lived in a similar icy climate. 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 even now *extinct* elephants (*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 on the frozen *tundra* and moved on when the game they were hunting *migrated* to a different area. Slowly, over many years, hunters and their families made their way up to the northeastern edge of Asia and into what is now Alaska. At that point in the distant past, people crossed into North America. Soon, they spread out over the entire North American continent, and even farther south, into what is now South America.

About 12,000 years ago, the last glacier that covered what is now Vermont had 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!

### Do you know...

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, that lived some 75 million years before modern humans.





Of course, the Paleoindians faced many challenges as they began to settle in Vermont. The glaciers eventually melted away, and the temperature continued to rise. Many of the animals the Paleoindians traditionally hunted died off and became extinct. However, the new, warmer environment gave rise to other animals, and other plants, and other trees—whole forests of trees. In order to survive, the original Vermonters had to learn to adapt to the new environments in which they found themselves. They invented special skills to

collect **resources** and to live safely. They built warm, dry shelters and discovered new tricks for hunting and **foraging**.



Archaeologists excavating and using a **transit** at a site in Essex.

big area of study for Vermont archaeologists. But how do archaeologists study these ancient people when there are no photographs, writings, or direct memories of this time?

The next section will tell you how archaeologists use science, special methods, and **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.

#### Did you know...

that archaeologists excavate **sites**?

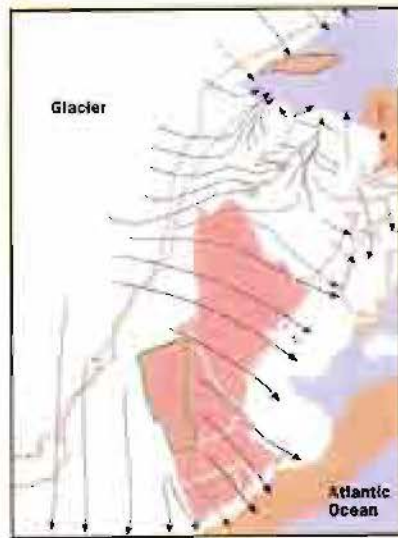
Archaeologists call their kind of digging **excavation**, because it is done very carefully and follows set rules and guidelines in order for them to learn as much as they can from the artifacts, and the **context** in which they find those artifacts.

Archaeologists call places where they excavate and find clues about past people, **sites**.



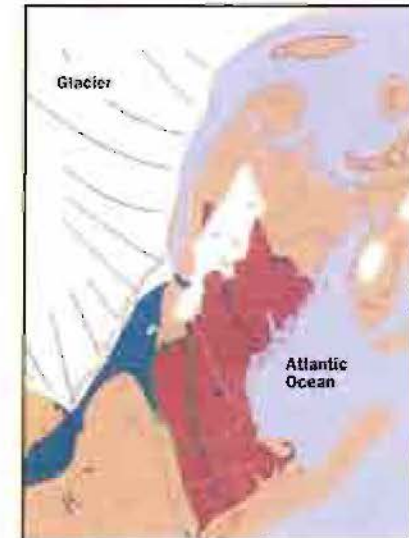
**1. 18,000 years ago**

Continental glacier covers all of New England. Parts of what is now Vermont are buried under more than a mile of ice.



**2. 12,000 years ago**

Ice begins to retreat. A huge amount of meltwater is trapped by the glacier. This large body of water is called *Lake Vermont*.



**3. 11,000 years ago**

Ice retreats beyond the St. Lawrence Seaway. Ocean water fills the space left by the retreating glaciers. The *Champlain Sea* is created.



**4. 8,000 years ago**

Land rebounds and the temperature begins to rise. The Atlantic Ocean is again cut off from Vermont. *Lake Champlain* is created.



At the end of the last Ice Age, what is now Vermont and the surrounding region was covered by a mile-high sheet of ice. Native Americans entered this part of North America soon after the ice melted.





## Chapter 3. What is Archaeology?

**A**rchaeology is the study of past people and their differing cultures through excavation, *analysis*, and *interpretation* of *material culture*. That's certainly 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 CCCH searched for artifacts and features left by Native Americans of the distant and recent past. When these important clues were discovered, they were used to reconstruct the ways in which people once lived.

Example of stone artifacts that preserve in Vermont's acidic soil.

Archaeologists are always searching for answers to important questions about the lives of ancient people.

What did the 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 descendents are no longer living, why did they disappear? In most cases, none of this information was ever written down, it certainly was never photographed with a camera. So, it is up to archaeologists to find out the answers to questions about the people of the past in the sites they left behind.

To make things more difficult for archaeologists, it is estimated that about 95-98% of past people's material culture doesn't normally preserve in Vermont's soil. This is because the majority of Vermont's soil contains acid, rising and falling water, and bacteria and other *micro-organisms* (small living things). Over time, these elements destroy anything the Native Americans made that originally came from living, organic material, like wood, plant and animal fibers, bone, and/or leather. You

### Did you know...

that *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 past 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 *precontact* or, in other words, the time before the arrival of Europeans.





Items made of organic material, such as leather boots rarely preserve long enough to be found by archaeologists.

can imagine, then, that nearly everything these people of the past wore, lived in, carried things in, or ate is gone. Pretty upsetting? Not exactly. There are still plenty of clues left in the ground.

Ok, so what *does* preserve in the ground of Vermont for hundreds or even thousands of years? Stone for starters. Luckily, stone artifacts can last for a very long time in the ground. And luckier still, because Native Americans had very little access to metal or other materials, they made a fair number of things in their everyday life from stone. It just takes a trained eye to spot these types of artifacts and to know what they were used for.

A second class of material that preserves fairly well in Vermont's soil is burned bone. We just explained that bone does not normally preserve for very long in the ground, and that is true. But if that bone is burned, in the process of cooking a meal for instance, the form of the bone changes enough so that it will last much, much longer. Archaeologists call preserved bone leftover from Native American meals, *faunal remains*.

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



A close up view of paleobotanical remains (corn, or "maize").

Archaeologists might find some of these remains in features that may be preserved in the soil. These features often are what is left of ancient fire, storage and/or trash pits. If there once was a fire pit at a site, the ground will be very dark brown or black in the place where the fire burned. If archaeologists dig carefully, they sometimes are able to see the shape and size of the original pit.

### Do you know...

how early Native Americans cooked things and boiled water? Until pottery was introduced, Native Americans used bark-lined or wooden containers that could not be placed over a fire. They would have burned up.

Instead, the Native Americans heated rocks in a fire until they were red hot. When the rocks were ready, the Native Americans dropped them into the containers of water and the water would heat and boil. Often in doing this, the fire-reddened rocks would crack from the temperature change.

Years later, when archaeologists find these reddish fire-cracked rocks, they know that there was probably a fire at the site, even if no remains of a feature are left.







Fire pit.



Fire pit stain uncovered by archaeologists.



Archaeologist excavating fire pit.

As we just mentioned, if archaeologists uncover the remains of a fire pit, they may find charcoal in the blackened earth. This is usually an important discovery for archaeologists because, as we mentioned above, charcoal can be used to tell many things— like what plants the Native Americans were eating, the type of firewood they used, and what time of year they were at the site. Charcoal can also be used to *estimate* the pit's age, or when it was created. This is done through a special technique called *radiocarbon dating* that will be explained later.

Finally, Native American pottery also will last for a long time in the ground. Unfortunately, even if a pot was originally 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 were probably using woven baskets or bark and wood containers to store and gather food, water and other resources. Unfortunately, because these items were made with organic material, they almost never survive intact.

### How Sites Are Found:

So now you know some of the things archaeologists normally look for, and hopefully find, when they investigate a site. But *how* do they find these things? Well, we mentioned at the beginning of this book that the people who are building the CCCH want to be careful not to destroy any valuable archaeological *evidence*. The government is also concerned about this. That is why part of the National Historic Preservation Act, called Section 106, *mandates* that archaeological sites be searched out and, if found, judged to see whether they are important enough to be thoroughly studied or avoided altogether and preserved "as is".

Throughout the planning process, archaeologists talk with the highway engineers and map out exactly where the highway will be built, and then discuss which areas are likely to contain sites that will be affected by the construction. Of course, every square meter of soil cannot be tested for evidence of past people. It would cost too much money and take too

#### Did you know...

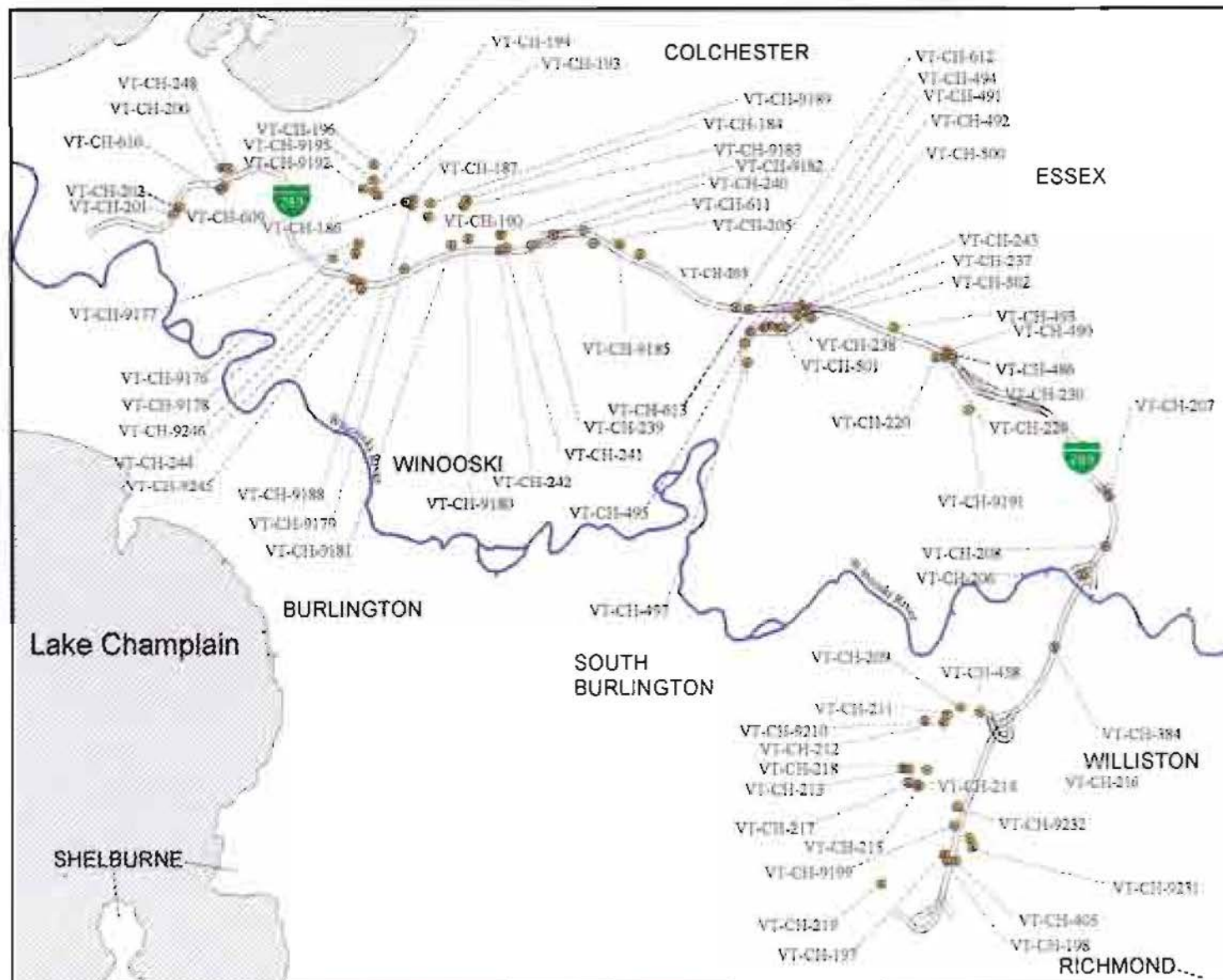
that archaeologists all over the world use the metric system? This system enables archaeologists to measure size more easily, without conversion in the field, and enables archaeologists across the globe to share their research.

1 centimeter = .394 inches

1 meter = 3.28 feet

1 kilometer = .621 miles





Map of the CCCH route with all of the identified Native American sites labeled.



much time. Knowing this, archaeologists have to make educated guesses, like detectives, in order to find sites.

The CCCH, like other highways, is being built so that we can get around with the least amount of time, effort, and traffic. That is how millions of people in North America travel or move things today: by car, bus, or truck. Of course, prehistoric Native Americans did not have cars. In fact, until Europeans came to this land, Native Americans did not have horses either. But, they did have the same ideas that you and I have today. They wanted to get around as quickly as possible with the least amount of effort. Now, how would a Native American travel or move things long distances quickly and easily? By water, of course!

Using canoes made of dug out trees or birch bark, the rivers and lakes of Vermont were the Native Americans' natural highways; we can call them *waterways*. Waterways provided water for bathing, cooking, cleaning, and drinking, food (fish, plants, and animals attracted to the water) and a quick and easy way to get through the dense forests that covered Vermont for thousands of years. With this in mind it makes sense that the Native Americans of Vermont would want to live near a lake, pond, river or stream. That way, they could always have quick and easy access to a waterway for travel and food. Knowing this, archaeologists often look for evidence of Native Americans near these natural waterways.

In trying to decide where to look for sites along the CCCH route, archaeologists naturally wanted to search around the waterways that would be crossed by the highway. Today, we call some of these waterways Indian Brook, Allen Brook, and the Winooski River (see map on Page 2).

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. 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 and 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 ideal spots for their camps and homes.



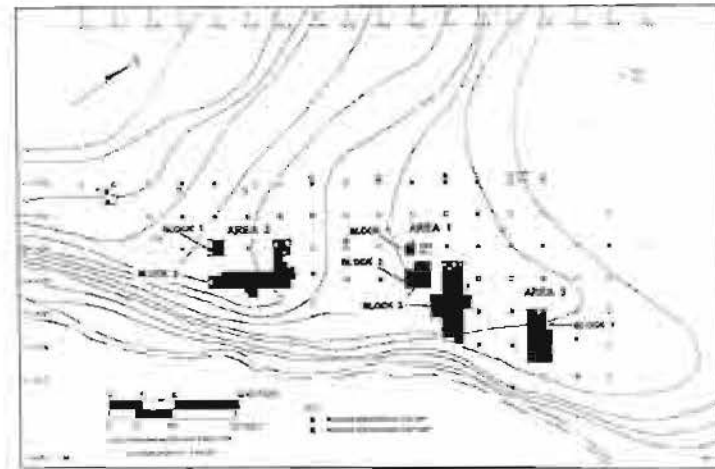
Archaeologists searching for sites during a Phase I survey. Note the brook nearby.



Of course, hundreds or even thousands of years may have gone by since Native Americans used any particular area. The land may have been logged, farmed, leveled or washed away by floods and erosion. 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 what the land might have looked like in the past before they choose a spot to test. Even then, some spots archaeologists choose don't always contain evidence of an ancient site. It is always possible that the Native Americans never lived in the spots archaeologists pick to test for sites.

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

Once a promising area is determined to be endangered by construction, archaeologists 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 may have seen on television or in *National Geographic* magazine. First, archaeologists excavate small test holes to see if any artifacts or features are present in each promising area.



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

Archaeologists normally dig lines of 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 and the depth of the soil layers, archaeologists determine how far apart to space pits, how big the pits should be, and how deep they should be dug. Many times during Phase I surveys, archaeologists do not find anything. Often times, however, new sites are discovered.

#### Did you know...

that 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 there was flooding, a fire, and many more things. Finding preserved stratigraphy is just another reason why context is so important to archaeologists.









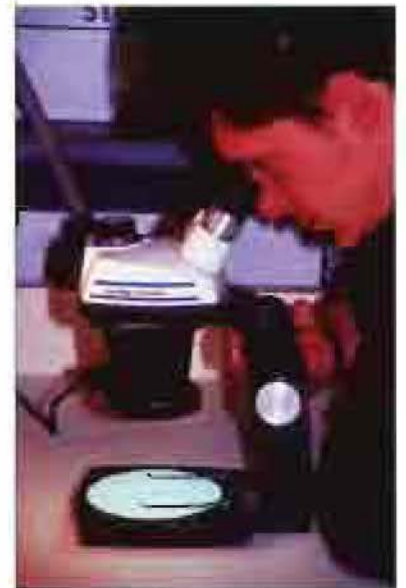
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## Understanding Context:

This brings up a concept that archaeologists consider to be extremely important: context— or how things relate to one another both when 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 know as much as they do from the small amount of evidence that preserves 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 archaeologist can look at the kind of stone it is made out of to see where it came from— is it local stone or is it a stone that was traded from far away? The archaeologist may 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 archaeologists have to investigate.

But, if archaeologists carefully 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 there is evidence of a fire pit, archaeologists may be able to tell what they were cooking. If there are storage pits, archaeologists can probably assume that they were occupying the spot for a long time. Archaeologists may 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, as amazing as some artifacts are, the information that comes from studying the relationship between artifacts and their surrounding context is necessary to fill in missing pieces and fully understand the past.



Archaeologist looking at a tiny artifact under the microscope.

## Preserving Information for the Future:

Finally, after archaeologists carry out all the necessary phases of investigation at sites in an area, it is ready for the construction of new roads and buildings. But the archaeologists' jobs are not done. There is a great deal of laboratory work and analysis left to do in order to finish the research and write up a concluding report. Every important piece of information and every artifact is carefully looked at to try and learn as much as possible from the site. After archaeologists have studied these





things thoroughly, they carefully store the artifacts and *records* for future study and preservation. 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. This is called *curation*.

Archaeologists write down all of the information they learn in a report that is available to everyone so that other archaeologists and the public may understand 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 Chittenden County fits into the bigger patterns of Native American life in New England and elsewhere in North America.

Of course, archaeologists also look at 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 CCCH planning process presented archaeologists with a rare and extremely valuable opportunity to study a large area of Chittenden



View of a storage box containing soil from a fire hearth feature.



View of storage boxes containing artifacts and notes.

County. They were able to notice patterns easily, like areas where Native American sites were clustered near each other. Archaeologists can assume that an area with many sites offered up something important that the Native Americans kept returning to— perhaps good fishing, or hunting, or a particularly fine type of wood or rock. The archaeology done for the CCCH also shows archaeologists 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 Chittenden County when the first Europeans came. The CCCH excavations uncovered sites that teach archaeologists and Vermonters things about Native Americans in Vermont that they had never known before, and sites that help confirm things that archaeologists had guessed about, or had tiny bits of evidence of, but have never been able to prove.

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All in all, the archaeology done for the CCCH presents a wonderful opportunity to learn about Chittenden County's original settlers. This is especially important because it is estimated that up to half of the settlements that once existed in Chittenden County already have been destroyed by our modern cities and towns. The CCCH archaeology gives us a rare look at 12,000 years of Vermont's past—a past that was full of people living their lives and caring for their families—a past 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 Chittenden County, Vermont, through time. This chronology will be illustrated by sites found during the CCCH archaeological studies. You will learn how archaeologists uncover evidence of Chittenden County's ancient past, the special places where Native Americans once lived, and some of the activities that archaeologists now know took place long ago.

So let's get on the highway and take a grand tour of Vermont's past!





## Phase I Site Identification

Archaeologists dig small test pits and do surface walkovers to find sites.



## Phase II Site Evaluation

Archaeologists dig small test pits and some bigger units to see how large and important the site is.

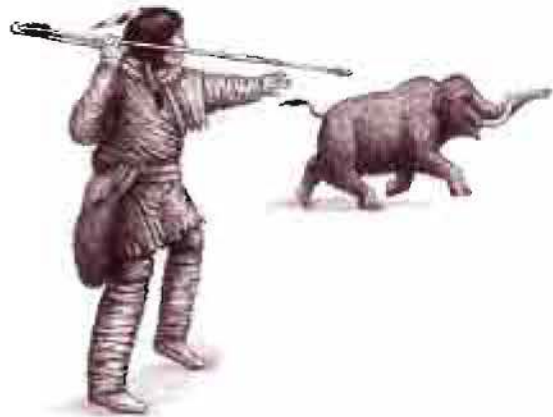


## Phase III Data Recovery

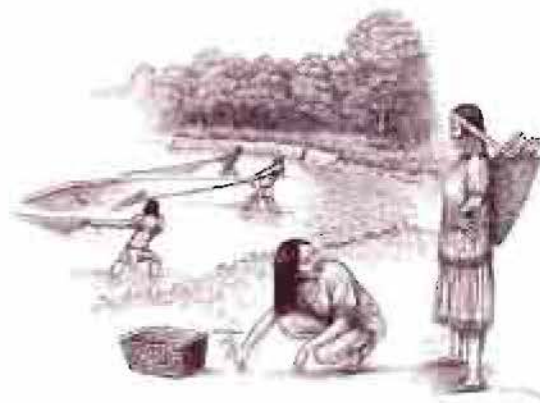
Archaeologists dig larger units to excavate bigger areas of the site before it is destroyed.



# Native American Archaeology Timeline



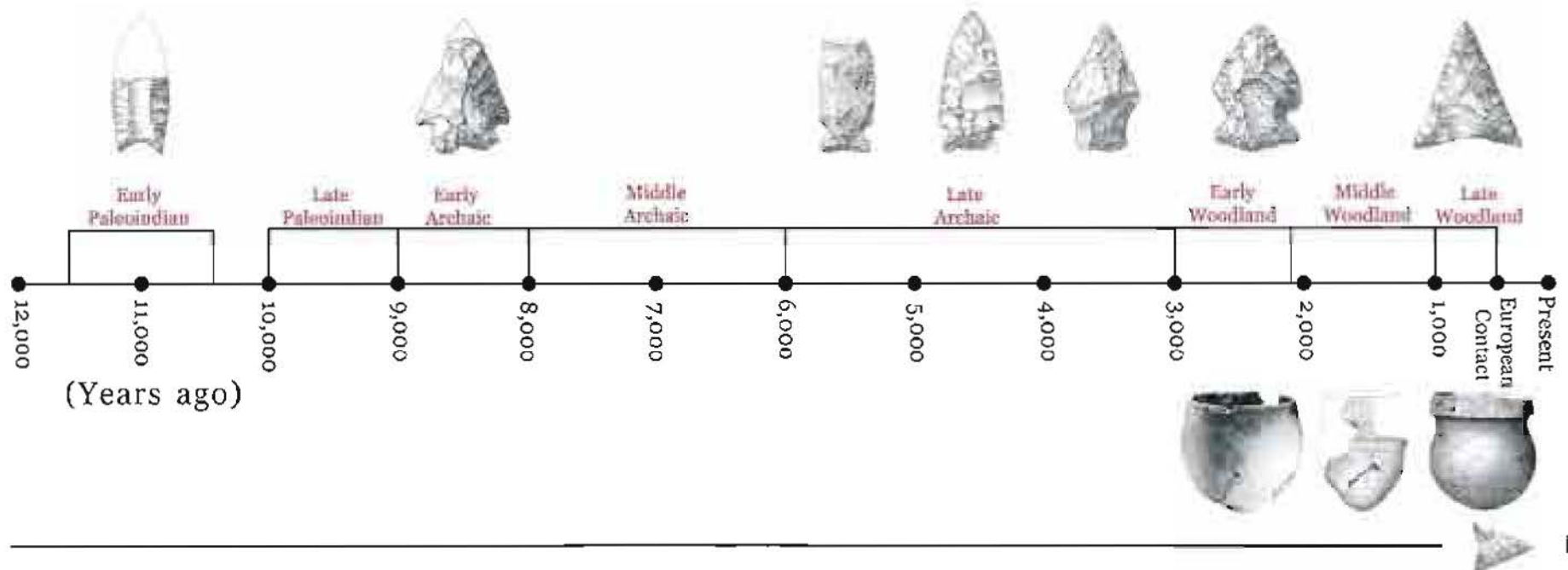
The Paleoindian Periods



The Archaic Periods



The Woodland Periods





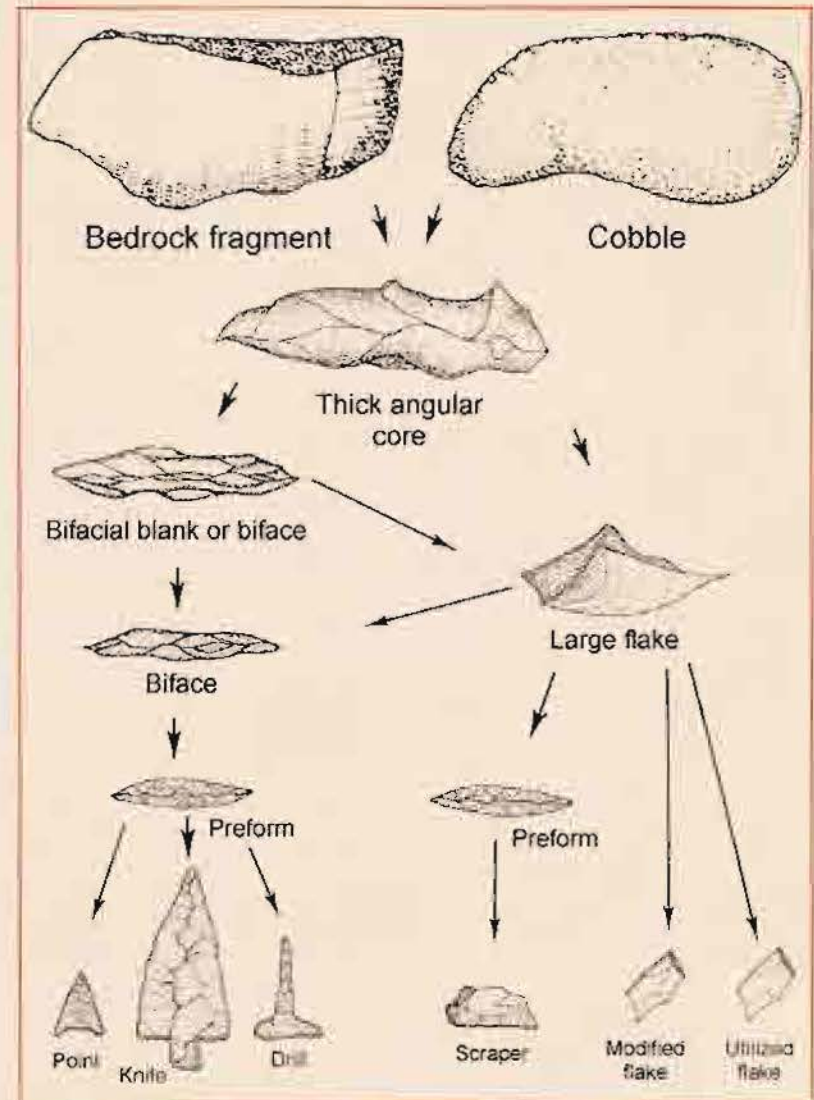
## How Native Americans made stone tools.

There are two general types of tools that Native Americans made and used throughout prehistory:

The first type of stone tools that Native Americans made are called **flaked stone tools**. Flaked stone tools were important to Native Americans because they could be made to have a very sharp edge. These tools had to be fashioned from special rock which breaks along even, smooth planes—like glass. The 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 ever look at a projectile point closely, you will see small ridges on its surface. This is from careful chipping, or flaking by the Native Americans, done 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.

There are many kinds of flaked stone tools found 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 are **groundstone tools**. These tools were made by slowly grinding, flaking, and/or or pecking away at certain kinds of stone to create a shape that could be used for specific activities. This took a lot of 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.





## Chapter 4. The Story of the Past

### Early Paleoindian Period

**-Time:** 9500 B.C.– 8000 B.C., or 11,500 years ago to 10,000 years ago.

**-Environment:** Though the glaciers had retreated North, it was still, on average, much colder than the temperatures in Vermont today.

**-Tools:** Clovis type, fluted projectile points, drills, 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 small animals, they are primarily known as hunters of big game such as, caribou, and mammoth.

The archaeology done for the CCCH uncovered prehistoric sites that date from about 11,500 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 timeline on page 17). That is over five hundred and fifty generations of families living in what is now Chittenden County!

All in all, 79 previously unknown prehistoric/precontact sites were found along the line of the planned highway. All of these sites tell archaeologists stories about Chittenden County's past, and about the unwritten history of Native American groups or cultures. Twenty of these sites were considered so special and so important to the preservation and understanding of the past that they were declared eligible for the *National Register of Historic Places*. That means that extra attention and special care had to be used to excavate them— going to the Phase III stage that we talked about before. Information gathered from these special sites will be the focus of the following sections.

### The Paleoindian Periods: Early and Late

Let's begin again with the Paleoindians. By the time they arrived in what is now Vermont, they were what archaeologists call *semi-nomadic*. This means that they moved around on a yearly basis within a more or less fixed territory tracking the animals they hunted, and gathering the plant resources they needed.

### The Early Paleoindian Period:

The first people to enter Vermont came about 9500 B.C., or about 11,500 years ago. Archaeologists call this period the Early Paleoindian period.



Base of an Early Paleoindian projectile point recovered from site VT-CH-230, in Essex.







During Paleoindian times, people hunted large game including animals like mammoths that are now extinct.



**Did you know...**

that archaeological sites are recorded and named in similar ways all over the country? They typically begin with an abbreviated, or shortened, state name. In our case, it is VT. Then, there would be an abbreviated county name, in our case, CH for Chittenden County, separated from the state by a dash. Finally, the next available number would be given to the site. For instance, VT-CH-197, a site that we discuss in the main text, is the 197th site to have been found in Chittenden County, VT.

During the Early Paleoindian period, the land that is now Vermont looked and felt nothing like it does today. Although the glaciers had retreated because of warming temperatures, it was still, on average, much colder than today. That's hard to believe, isn't it?

Perhaps the biggest difference between then and now was that a salt water ocean covered what is now Lake Champlain and the surrounding area. About 13,000 to 10,800 years ago, the water level of what scientists call the Champlain Sea was much higher than the level of Lake Champlain today. Sea-water covered the lowland sections of Burlington and Winooski and other low-lying areas in the Champlain Valley. The Champlain Sea was home to sea creatures not found in the lake today such as ocean fish, seals and even whales! Scientists also believe that, like today, Chittenden County probably was a major flyway for ducks, geese and other 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 curbed the cold arctic winds blowing in from the glacier to the north.

After the last great Ice Age ended, temperatures warmed up slightly. Most of the land that is now Vermont became covered by small, shrubby cold-weather plants, generally called *tundra*. In addition, a thin forest of spruce, fir, and birch probably grew in the area. These trees and other plants, however sparse, could have fed the giant vegetarians that the Paleoindians loved to hunt such as mastodons and mammoths.

**Did you know...**

that building for transportation purposes has been showing people evidence of the past long before there were cars or highways? In the mid-1800's, people building a railroad line discovered a whale skeleton in Charlotte, Vermont, proving that whales were once swimming over that same Chittenden County town.

Oddly enough, around the same time, during another railroad project on Mt. Holly, workers also discovered the only mammoth skeleton ever to be found in Vermont! This shows archaeologists and paleontologists that elephant-sized mammals walked over ground that had once been near the ocean. This ocean inlet, where whales once swam, is ground that we walk over today. Remains of these animals can be seen in Perkins Hall at UVM.

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



were doing here, and the places where they may have chosen to live. There is no need to wonder if they were here or not, because archaeology shows us that they certainly were.

There are a few good clues, but many difficulties, in trying to understand the lives of the Paleoindians. The main problem is simply that so much time has passed since they were here. We already have talked about Vermont's soil, and the fact that it does not often preserve organic materials for very long. Archaeologists know 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/or fire pits, are not likely to last for 11,000 or 12,000 years in Vermont's acidic soil. So, it is up to archaeologists 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 in which the artifacts are found.

There were five Paleoindian sites found during the archaeology for the CCCH. How do we know? First, archaeologists determined that the locations and the types of soil at the sites would have made attractive places for the Paleoindians to have stayed. Secondly, and maybe more importantly, archaeologists could tell how old these sites were by the types of tools they found.

Nearly every period and every *archaeological culture* has its own distinct way of making tools. 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. When archaeologists match types of projectile points with different periods of time and different groups of people, they create a *point typology*.

Remember we said that there are a few good, or fortunate, things for archaeologists studying the Paleoindians? Well, the idea of a point typology or a timeline showing changes in style and shape leads us to one of them. Because Paleoindians were the first people to enter into the New World, and because, being nomadic, they thought nothing of moving great distances,

Do you know... what this is 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 of Vermont did not use bows and arrows. 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).





**Do you know...**

how the Native Americans used 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 would increase the speed and accuracy of the spear and improve the hunter's chances of hitting his/her target.



archaeologists believe that there is little difference between Early Paleoindian groups across North America. This means that from Alaska to Vermont, Paleoindian cultures were generally the same. Major evidence for this theory can be found in the similarity between projectile points, from this early period discovered throughout the continent.

Nearly all Early Paleoindians used a type of projectile point archaeologists call **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 and Alaska, and they all seem to come from the same Early Paleoindian culture.

There is also convincing evidence of a shared culture in the types of stone that they used to make their tools. In the lesson on page 19, you learned that in order to make flaked stone tools, Native Americans needed special, glassy stone that broke away in even, regular ways. In most later periods, Native Americans quarried stone from sources found near their homelands. However, Paleoindians, who were the first humans to arrive in North America and Vermont, often got their tool-making stones 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 far-away stone. But, most archaeologists feel that this is solid evidence of long-distance movement, or even of trade between different Paleoindians groups. It is difficult to imagine that a single person or group of people would go to New York, Quebec, Maine, Pennsylvania, Ohio, and many other places simply to collect stone, but some argue that they traveled these areas while hunting and collected stone along the way. Instead, it is also possible that they traded over long distances for good or familiar types of stone.

Trade in stone may have been a way for Paleoindians to keep in contact with other far-away 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 even northern Quebec, in an archaeological site in Vermont!





## CCCH Early Paleoindian Sites:



Demonstration of  
spear throwing with  
an atlatl.

During the CCCH archaeological excavations, archaeologists found an Early Paleoindian site in Williston. It was on a slightly sloping knoll very near Allen Brook, not too far from Route 2. Archaeologists determined that it would have provided a great view in all directions, enabling people living there to spot game or people approaching from a distance. It also faced south, protected from the wind and warmed by the sun. The site was given the number VT-CH-197, and because it was located extremely close to the planned highway, it was excavated extensively.

VT-CH-197 turned out to be one of the biggest Paleoindian sites ever found in the northeastern U.S., and one of only a few Early Paleoindian sites known in Vermont! Archaeologists think that between 11,000 and 10,000 years ago, about 25-50 individuals lived at this site for a while, though not permanently.

Archaeologists believe that Paleoindians were living at VT-CH-197 during the summer. Remember, in the lesson we said that archaeologists search for stone flakes to show them the location of a site. At VT-CH-197, there was a very wide scatter of flakes over a very large area. Archaeologists hypothesize that this wide scatter indicates that people were moving around a lot within the camp, going about their activities in all areas of the site. Activity outside in the open is more typical of summertime. In other words, at a winter camp, archaeologists would expect flakes in the ground to be concentrated in areas where houses or shelters once stood, because during the winter more activities would have occurred inside houses. In the winter, it would have been too cold for the Paleoindians to do anything outside of their houses for very long. Also, archaeologists did not find many projectile points at the site. If it had been fall or winter, archaeologists think that there would have been more points, as those seasons would have been better for hunting. Instead, archaeologists believe that VT-CH-197 shows evidence of a camp used during the warmer part of the year.

Some projectile points were found, however, and archaeologists were sure that site VT-CH-197 dated to the Paleoindian period after a fluted projectile point was found during the excavation of the site. It was made from a local rock, called quartzite. In addition, about a third of the artifacts (mostly flakes) were of an exotic kind, meaning that they were of a non-local stone material. Some of the stone material came from Munsungan Lake in northern Maine and some came from a source in southern Pennsylvania. The total distance between these sources is over 900 km., or over 560 miles. That's pretty impressive if your only way of travel is by foot or canoe! Again, though possible, it is unlikely that anyone walked that far to collect these stones. Therefore, this site is a good indicator that the Paleoindians of Chittenden County were trading with other Paleoindian



groups across the continent.

It may have been that a group or groups of people were drawn to the area of the site because it was once rich in plants, nuts, seeds or other wild foods. The fact that this was probably a summer camp used while people collected plant foods shows a different, rarely seen side of these big-game hunters. For archaeologists, it is also evidence that, as the climate of North America was changing, the Early Paleoindians were beginning to change with it, and were learning to adapt to their local environment.



Archaeologists and volunteers screening at site VT-CH-197.

### The Late Paleoindian Period:

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, became rare and probably migrated northward, out of the Paleoindian's range in Vermont. 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, more exclusively.

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

#### Did you know...

that in the early part of the century, archaeologists thought that Native Americans had been in the New World for only a few thousand years? Then, archaeologists found projectile points in Folsom, New Mexico that were buried near, and in one case, stuck in, the bones of an extinct species of buffalo. Soon after, points were found with mammoth bones in Clovis, New Mexico. This site is where Clovis points get their name from, and how archaeologists first learned that Native Americans had been in North America for more than ten thousand years.





## CCCH Late Paleoindian Sites:

Late Paleoindian period sites are very rare in Vermont. In fact, the archaeology done for the CCCH uncovered the first Late Paleoindian period camp ever found in the state! The site was located on a rocky ridge next to Indian Brook in Essex. Archaeologists think that this location would have provided a dry campsite and good view for the Native Americans. The site was given the number VT-CH-230. VT-CH-230 covered within a very small, very concentrated area. Archaeologists think that the site was only used briefly, and that it was almost certainly a hunting camp. The artifacts recovered from this small site tell archaeologists why.

At the Late Paleoindian camp within site VT-CH-230, archaeologists discovered parts of two projectile points along with 146 flakes, left over from tool making.



Visitors watching archaeologists screen at VT-CH-230, in Essex.

Because of the small number of artifacts, archaeologists think that there were only one or two people at the camp, that they were there briefly, and that they were preparing tools for hunting. There is more evidence of this in the four other stone tools found at the site. Archaeologists think these tools were used to scrape and cut soft material like animal meat or sinew. There also was

one small piece of burned bone found at the site. This could mean that a small cooking fire was present at this hunting camp even though remains of this feature have long since been eaten away by the soil.

### Late Paleoindian Period

**-Time:** Approximately 8,000 B.C.– 7,000 B.C., or 10,000 years ago to 9,000 years ago.

**-Environment:** The environment slowly warmed and the forests grew more dense.

**-Tools:** During the Late Paleoindian period, people began to make a wider variety of projectile points, including Holcombe type, and non-fluted projectile points. While their tool kit was probably expanding, many of the tools 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 stone as well.

**-Food:** Local food resources became more important during the Late Paleoindian period, though people were still primarily focused on hunting available large game.

The shape and style of a single broken and incomplete projectile point found in one part of the site indicates that the site is Late Paleoindian in age. The type found at this site in Essex represents the *Holcombe phase*, named after the Holcombe site in Michigan. This type of projectile point is extremely rare, not only in Vermont, but throughout the entire northern U.S. Holcombe points are known from only one other site in Vermont in East Highgate. Others are known from Ontario, Canada, and there is one similar point known from Martha's Vineyard, in Massachusetts and another from the Lower Merrimack Valley in New Hampshire. That's it. These kinds of projectile points are found more commonly in the upper midwestern U.S. and Canada. Holcombe points are thought to date from about 8200 B.C., or about 10,000 years ago. This is probably a good estimate for the earliest occupation of Vermont site VT-CH-230. Another area of this site was reoccupied at least once, several thousand years later (see the Early Archaic period section).



Archaeologists excavating and taking notes at site VT-CH-230, in Essex.

The Holcombe point was made from an exotic chert found only in the Hudson Valley of eastern New York, as were many of the flakes. Archaeologists know that this chert was widely used in the Paleoindian period, so its presence in Vermont is just another piece of evidence showing archaeologists that this site dates to the Late Paleoindian period.

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 preserve more artifacts and features within them, providing archaeologists with even more information about these ancient people, these original Vermonters.





## The Archaic Periods: Early, Middle and Late

As Native Americans settled in what is now Chittenden County, they became more specialized and grew very familiar with their environment. At a certain point (archaeologists usually choose the date of 7000 B.C. or about 9,000 years ago), their culture and ways of life changed so much that archaeologists place them in a different period. This marks the beginning of the Early Archaic period.

### The Early Archaic Period:

It was not only the Native Americans that were changing. As we mentioned before, the environment was continuing to change as well. It grew warmer, and this warming helped to shape many kinds of wetlands— from lakes and ponds to swamps and bogs. Sometime during the previous Paleoindian period, the ancient Champlain Sea shrank and became disconnected from the ocean, making it the freshwater lake it is today. During the Early Archaic period, the newly formed Lake Champlain was lower than its present-day level.



Early Archaic period  
bifurcate-based  
projectile point  
recovered from VT-CH-  
613, in Essex.

A variety of plants began to spring up in this warm, wet environment. The thin pine forests of the Paleoindian period were taken over by hardwood forests of beech, oak, ash, and maple. These trees, especially those that produced nuts, brought new animals and birds into 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.

The evidence of increased specialization is found in archaeological sites. Previously, in Paleoindian times, Native Americans mainly used exotic stone from far distances for their stone tools. During the Early Archaic period, however, people began to use local Vermont stone. This interesting

### Early Archaic Period

**-Time:** 7000 B.C.– 6000 B.C., or 9,000 years ago to 8,000 years ago.

**-Environment:** The climate 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 used *bifurcate-based* projectile points and began to make a greater variety of tools, such as knives. The people of the Early Archaic period began to rely exclusively on local sources of stone for their tools.

**-Food:** Foraging for different wild foods probably took on a greater importance in the Early Archaic period. Nuts, seeds, and edible plants were likely harvested when they were in season. Hunting was still widely practiced. Burned *marten* bone indicates that the Native Americans were hunting a greater variety of game, likely for clothing as well as for food.



During Archaic times, warmer temperatures allowed new plants and animals to survive in Vermont. People adapted to the change in climate and began to hunt and gather a wider variety of food resources.







Archaeologists excavating at site VT-CH-613, in Essex.

change shows archaeologists that, during the Early Archaic period, Native Americans were becoming even more familiar with their local environment. They were spending more time in what is now Vermont, rather than traveling vast distances. The Native American population was also growing. Bigger camps provide archaeologists with clues of a more *sedentary* life, which perhaps lessened the need for long-distance trade.

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. They may have even returned to the same places year after year.

### CCCH Early Archaic Sites:

There were 13 sites found during the archaeological surveys for the CCCH that date to the Early Archaic period. They each provide archaeologists with clues about this ancient time, and help us understand this period of Vermont's Native American past.

Of the thirteen sites from the Early Archaic period studied along the highway corridor, archaeologists noticed two distinct kinds. The first type of sites were hunting camps. Hunting camps in the Early Archaic are further evidence that Native Americans were more specialized during this period than they had been previously.

The hunting camp sites found along the CCCH were all very small, perhaps supporting only one or two people for a few days at most. This means that these hunters' families were somewhere else while the hunters hunted. They probably had a more permanent camp that the hunters temporarily left to hunt game for their families. Hunting camps, like some of the Early Archaic sites found along the CCCH corridor, provide archaeologists with evidence that the Native Americans were dividing

#### Did you know...

that archaeologists can tell the age of a site from charcoal that was found at it, often in a feature? 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 in 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 that has preserved, like charcoal. When this is known, archaeologists can roughly determine when the tree that the charcoal came from died, and from that, roughly how old a particular site is.



tasks within their family or group. It also shows archaeologists that people during the Early Archaic period were becoming so familiar with their environment that they could leave the security of the their family group and base camp to hunt and collect plant foods separately.

VT-CH-613 was one such Early Archaic site. It was found on a flat delta top very near Indian Brook in Essex. At the site, archaeologists found two heavy concentrations of artifacts. Archaeologists call these concentrations "activity areas". In the case of this site, the concentrations of artifacts probably mean that, at different times, two different hunting parties liked the spot so much they both chose it to make camp. Remember, Native Americans were expert camp finders.

The importance of the CCCH archaeological study is made even more obvious with this site. The projectile points found at site VT-CH-613 were made only during the Early Archaic period. At the time it was studied, this site was only the second Early Archaic period site to be extensively excavated in all of Vermont; the other one was discovered during another highway study in Swanton.

#### Did you know...

that as little as twenty years ago, many archaeologists thought that there were no people in Vermont during the Early Archaic period? Now archaeologists know that this is not true, but for many years, sites from the Early Archaic were so rare that it seemed to people that the Native Americans simply disappeared during this period. New archaeological excavations, especially ones done during the CCCH planning, help archaeologists learn more about the original Vermonters, and fill in the gaps of our shared knowledge of the past.

Because the site was so well preserved, archaeologists could even tell the number of times the Native Americans made projectile points, and how many times they made other tools.

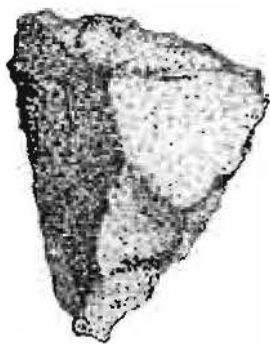
A little farther down the river, another Early Archaic hunting camp, VT-CH-494, was also discovered through the CCCH studies. It contained the remains of a burned marten bone as well as a few pieces of burned deer bone. This evidence helps confirm to archaeologists that people of the Early Archaic period were hunting smaller game, in addition to deer. Moreover, martens, with their thick fur, most likely would have been hunted for their warm pelts in order to make clothing. While the hunters were away from their home camp, they probably ate the marten and kept its precious fur. This bone also shows that site VT-CH-494, and probably all of the Early Archaic camps found along the river, were used during the late fall or winter months, as this would have been the best time to hunt or trap martens.

The most amazing proof that Native Americans were becoming specialized during this period comes from the second kind of site found during the CCCH excavations. Archaeologists have named



Marten remains have been found in archaeological sites. Their fur was likely used to make clothing.





Scraper—a tool used to process wood and/or animal hide.

these sites, nine in all, *extractive camps*.

All of these sites were located on gently rolling hills near Indian Brook in Essex. These sites, VT-CH-230 (a later occupation of the Late Paleoindian site), VT-CH-486, and VT-CH-490, are not anything like typical Early Archaic hunting camps. They are bigger, and cover larger areas. More importantly, high concentrations of artifacts were discovered in specific areas of these sites.

Using their careful records and maps of the site, archaeologists discovered that the area where the most artifacts were recovered matches the shape of an oval house structure, measuring roughly 8x12 m (or about 25x36 ft.), like the size of a two car garage. Archaeologists also recovered a few projectile points, or at least parts of them from these sites. This helps confirm that people inhabited the site during the Early Archaic period. There are too few projectile points, however, to suggest that this site was a hunting camp.



Archaeologists screening soil at VT-CH-490.

The answer to the mystery of what people were doing at site VT-CH-490 during the Early Archaic period may lie in the large number of scrapers and other processing tools found in very concentrated areas. At VT-CH-490 alone, there were 71 scrapers recovered! Imagine, for a minute, that you were walking through the woods and you discovered 71 rusty tools lying in a big circle. You would probably think that at some point in the past, people must have been doing something pretty big in that area, right? Well, that's exactly what archaeologists thought about this site. But what could it be? There was nothing like this reported from other local archaeological sites, though similar scrapers have been dated to around 7000-6000 B.C. in Maine.

Archaeologists analyzed the context of the site and the tools found within it and they came up with an answer. About 9,000-8,000 years ago, the area was a lot warmer and wetter than it is today. The scrapers and other tools had a large amount of wear on them, meaning the edges were dull from so much use. Archaeologists knew that the warm, wet conditions probably caused a great number white cedar trees and other wetland plants to grow in the area. They quickly realized what the Native Americans were processing— *wood*.

Think of all the many, many things that we use wood for today. Well, having no metal, plastic, or other modern material, the Native Americans needed wood for an even wider





Archaeologists excavating at site VT-CH-230, in Essex.

variety of things. Of course, none of these things preserved in the ground, so archaeologists can only hypothesize about what they were making— but they have a few ideas.

Archaeologists know from projectile points they find that during the Early Archaic period Native Americans hunted with spears and atlatls. A critical part of any spear is the wooden *shaft*. Cedar would have been an ideal wood for spear-shaft making. So, the most obvious reason for collecting wood and processing it at sites in Essex would have been to make spear shafts. Of course, they could have been using the wood to make many other things as well: their shelters, other tools, or even things like snowshoes, sleds, or even fish weirs (large fish traps made using log poles). More sites like these need to be found for archaeologists to get a better idea of this aspect of the Early Archaic people. In any case, it is extremely fortunate to have discovered such important sites right here in Chittenden County.

### The Middle Archaic Period:

The CCCH archaeological studies found and documented sites from almost every period of Vermont's Native American past. However, there is one big exception to that timeline. Archaeologists call the time from about 8,000–6,000 years ago (or 6000–4000 B.C.) the Middle Archaic period. There were no sites of this period found during the CCCH excavations. In fact, very, very few Middle Archaic sites have ever been excavated in the state.

It would seem to many people that Native Americans disappeared from Vermont after the Early Archaic period. Yet, most archaeologists know that this cannot be true. There were people living in Vermont before the Middle Archaic period, and after, and there is no good evidence that people would have wanted to leave the area. In addition, people have found projectile points in Vermont that match the point typology for the Middle Archaic people in other states, such as New Hampshire and Maine. These finds have been isolated and without context, however, and remain only tantalizing clues about the presence of people in Vermont during this period and a reminder to us all that, so far, the archaeological record of Vermont is far from complete.

Archaeologists are hopeful that with continued research, they will one day find a site that will tell us more about the Middle Archaic period in Vermont. Until then, a piece of our shared past remains a mystery.





### Late Archaic Period

**-Time:** 4000 B.C–1000 B.C., or about 6,000 years ago to 3,000 years ago.

**-Environment:** Temperatures during the Late Archaic period were warmer than they were in previous periods, and warmer than they are today. There was increased precipitation, and these factors combined to produce a time of abundance in Vermont. Fruit and nut-bearing trees grew, and other nutritious plant resources sprang up as well.

**-Tools:** Archaeologists sub-divide the Late Archaic period in Vermont, based on different and distinctive projectile points, and tool collections. These include: Otter Creek, Laurentian, and Susquehanna Tradition point types and related stone tools, among others. A variety of tools with many uses are common during the Late Archaic period.

**-Food:** The people of the Late Archaic period hunted and collected a wide variety of game and wild foods. Fish were caught, birds and fowl were probably hunted, and many plant types were harvested for foods and medicine.

### The Late Archaic Period:

The Late Archaic Period began about 6,000 years ago, and lasted for approximately 3,000 years. Temperatures were warmer during this period than they had ever been, and evidence shows increased *precipitation*, meaning that there was more rain and snow than ever before. 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.



Late Archaic period Otter Creek type projectile point from site VT-CH-879 in South Burlington, near the Williston section of CCCH.

There is a great deal of archaeological evidence showing advancing *technology* in the Late Archaic period, particularly in terms of specialized hunting and gathering. For instance, at one Late Archaic site in Richmond, Vermont, archaeologists discovered the remains of bear, beaver, chipmunk, rabbit, white-tailed deer, red squirrel, muskrat, porcupine, fisher, mink, and rather surprisingly, striped skunk. In addition, laboratory analysis showed that the site contained the plant remains of raspberries, blackberries, blueberries, mulberries, grapes, nightshade, hawthorn, butternut, acorn, types of wild beans, chenopodium, amaranth, bullrush, and flat sedge. Certainly, this shows archaeologists that the Native Americans had a very acute sense of their natural surroundings! The variety of plants identified indicates that they were using plants for medicines as well as for food.





Late Archaic period  
**Brewerton type**  
projectile point  
from site VT-CH-  
495, in Essex.

Some archaeologists even think that by the time of the Late Archaic period, people were coming to live together in larger communities, at least for part of the year. Tribes may have been formed this way. These communities may have pooled together some of their resources and divided hunting and foraging tasks among themselves.

No matter how they chose to live together, archaeologists know that Native Americans of the Late Archaic period were spreading out farther than ever before. Late Archaic period sites have been found all over Vermont, in all areas— from the shores of Lake Champlain to the tops of mountains. Native Americans thrived during this time, and archaeology is the science that proves this for all of us.

Because the Late Archaic period is so long, archaeologists break it up into smaller sub-periods. They are called *traditions*. These traditions used different types of projectile points and made different kinds of artifacts. Archaeologists still are not sure whether these different types of stone tools represent different cultures, or whether the same group of Native Americans adopted different styles and technologies through time. It is just one more exciting question that will require more site discoveries and further interpretation and analysis by archaeologists.

### CCCH Late Archaic Sites:

The CCCH excavations led to the discovery of 13 Late Archaic sites. While Late Archaic sites throughout Vermont show evidence of a variety of living situations and communities, the CCCH excavations only involved hunting camps.

Every one of the Late Archaic sites was located where there is or once was a good source of water. This is greater evidence that what is now Chittenden County was rich with game and other



Archaeologists sort through feature soil to find small, burnt animal and plant remains. These remains can tell archaeologists what types of food the Native Americans were eating.



Late Archaic period  
Narrow Point tradition  
projectile point from  
site VT-CH-238, in  
Essex.







Archaeologists excavating at site VT-CH-384, in Williston.

natural resources throughout the Late Archaic period. It also shows archaeologists that the Native Americans were continuing the same practices begun in the Early Archaic period. Namely, that they used waterways for transportation and other essential needs, and formed small hunting parties to go into the forests and hunt game.

One example of a Late Archaic period hunting camp is site VT-CH-491. It is located on a west-facing, gently sloping hillside above Indian Brook. The remains of a hunting camp were present—including an *Otter Creek type* projectile point (like the one shown on page 35). This type of point represents what archaeologists call the *Vergennes phase* of the *Laurentian tradition*. This site gave archaeologists a great opportunity to research a small hunting camp made by these people.

Another, more recent Late Archaic period site was discovered near the Winooski River in Williston. It was given the site number VT-CH-384. It had relatively few artifacts located in a small area,

so, like other Late Archaic sites found along the CCCH route, it likely represents a hunting camp.

During the excavations, a broken *Genesee type* projectile point, named for a style of point first found in New York, and another projectile point tip were recovered at site VT-CH-384. They were made with a local Vermont stone called Hathaway chert. Archaeologists were very excited by these projectile points because they are rare in Vermont. What made the discovery even more fortunate was that the *Genesee* point was found very close to a feature, in this case, a fire pit. The fire pit had fire-cracked rock in it and charcoal which archaeologists used to date the site. This site became the first in Vermont to contain a *Genesee* point and datable charcoal together. The radiocarbon date of 1750 $\pm$ 60 B.C. is important because it helps archaeologists form a timeline for the Late Archaic period—not only for Vermont, but for the entire region as well. This, in turn, allows archaeologists all over North America get an idea of what kinds of tools Native Americans were making in this region during the Late Archaic period, and when.

For most of the Late Archaic period, archaeology tells us that there were many Native Americans living all over Vermont. However, near the very end of this period there seems to have been a drop in population. This is true for Chittenden County as well. Archaeologists find far fewer sites from the later portion of the Late Archaic period, and though it may be that

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archaeologists just haven't found the locations of these sites yet, that doesn't seem likely. Some kind of population change seems likely, especially because Native American sites from the next period in Vermont's prehistory, the Early Woodland period, are also very rare.

Archaeologists and other scientists know that towards the end of the Late Archaic period, temperatures dropped and became colder 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 resources 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 about 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.





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## 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 (1000 B.C.), 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 were more scarce because of the colder temperatures. Over the span of the Early, Middle and Late Woodland periods, however, temperatures warmed up to what they are today.

During Woodland times, Native American populations grew and it was a time of major advances in technology. As far as archaeologists can tell from excavated sites, Woodland populations had the most technological advancement of any previous period. Woodland sites also provide the best view of other aspects of Native American life such as religion. The Early Woodland period saw the introduction of pottery, the bow and arrow, and by the beginning of the Late Woodland period about a thousand years ago, Native Americans in this area had begun to cultivate plants and practice simple *agriculture*. This means that they started farming by planting crops instead of relying solely on wild plant foods.

Of course, because Woodland sites are more recent, archaeologists often find them better preserved than those of previous periods. Better preservation means that there is more left in the ground to study. In addition, the use of pottery is very important to archaeologists, and not only because it preserves so well in Vermont's acidic soil. Pottery was molded and decorated, and the craftsmanship of the Native Americans gives us a glimpse into their beliefs and creative visions. Like projectile point styles, styles of pottery decoration changed over time and therefore, archaeologists are able to tell how old some Woodland sites are by decorative patterns on pottery.

### The Early Woodland Period:

The first of the Woodland periods, called the Early Woodland period in Vermont, is not well understood by archaeologists. As we said before, Native American populations appear to have dropped toward the end of the Late Archaic Period and this seems to have continued throughout the Early Woodland period. Sites are rare from this time, and are nearly always found very close to sources of water. The sizes of the sites appear to get smaller as well. Archaeologists hypothesize that this means the Native Americans were no longer living in large communal groups as they probably were during the Late Archaic period. Rather, they appear to have gone back to living in smaller family groups or other smaller group types. The causes for this are still a mystery to archaeologists. For reasons that also are not well known, Native Americans of the Early Woodland period moved out





During Woodland times, people began to make decorated clay pottery, cultivate crops such as corn, beans, and squash, and live in larger, more permanent settlements.





### Early Woodland Period

**-Time:** 1000 B.C.–100 B.C., or 3,000 years ago to 2,100 years ago.

**-Environment:** Temperatures grew colder in the Early Woodland period. Nutritious trees and plants became scarcer. Populations grew smaller.

**-Tools:** The most common projectile point in the Early Woodland period is the Meadowood type projectile point, but Adena points are also known from Vermont. Early Woodland sites and tools are rarely found in this state, but the discovery of cemeteries from this period has given us an indication of their rich culture. Pottery was first made and used in the Early Woodland period. The bow and arrow were first used during this period as well.

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

of many areas that had been populated during the Late Archaic period, and instead chose to stay in lower, wetter valleys.

Some archaeologists think that in the New England area, the Early Woodland people's culture was brought here or borrowed from mound-building people in Ohio called "Adena". Others 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 had vast trade networks—perhaps becoming even more broad, and certainly more diverse than those that have been reconstructed for earlier periods.

To add to the mystery of these people, the few sites that have been found for this period in Vermont are primarily cemetery, or burial sites. From these rare and important glimpses into the beliefs and cultural practices of the Native Americans, archaeologists know that the Early Woodland people had a complex and vibrant way of life. Unfortunately, sites that show how these Native Americans lived from day to day are even more rare. The archaeology done for the CCCH gives all of us a chance to look at the everyday lives of the Early Woodland people.



### CCCH Early Woodland Sites:

Sites VT-CH-491 and VT-CH-495 were found near each other, close to Indian Brook in Essex. Like sites from other periods, the Early Woodland sites found during archaeological studies for the CCCH appear to be hunting camps. From the small size of both sites, archaeologists assume that the Native Americans only were there for a few days. Archaeologists know from broken *Meadowood type* projectile points that the sites are definitely Early Woodland in age. As in other periods, the Native Americans who camped at these sites were most likely hunting

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



deer for their families who resided in the lowland valleys. From the presence of different sized flakes, archaeologists know that the hunters were making projectile points and possibly other stone tools. The discovery of other tools like scrapers helps confirm that they were processing meat at the sites too.

The Early Woodland period sites found along the CCCH route, though small, help archaeologists understand the daily lives of people living in what is now Vermont during this period. Archaeologists know from these excavations that during the Early Woodland period, people were still forming small hunting parties to collect game, even though their homes were probably located closer to major waterways somewhere else.

### Middle Woodland Period

**-Time:** 100 B.C.–A.D.1000, or 2,100 years ago to 1,000 years ago.

**-Environment:** The temperature 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 large, well-established trade routes. Diverse pottery was made and used.

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

### The Middle Woodland Period:

By the beginning of the Middle Woodland period, the colder temperatures levelled off and soon began to rise once again. 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.

While the few known Early Woodland period sites have been found in the valleys and lowlands of Vermont, the more numerous Middle Woodland period sites have been found in a greater variety of locations. Archaeologists believe that, from 2,100 to 1,000 years ago (100 B.C.–A.D. 1000), as Native American populations expanded in valley areas— near ponds, rivers and Lake Champlain, the natural resources of those areas became scarce. Naturally, the Native Americans began to look for resources in the forests and more upland areas 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 and for meat. In order to successfully procure this variety of game, Native Americans of the Early Woodland period

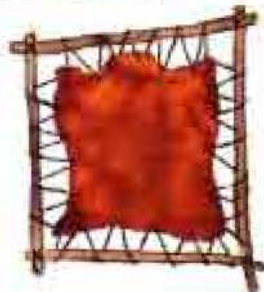




had developed special skills, techniques, and tools. Like the Early Woodland period people before them, the people of the Middle Woodland period made and used pottery with their own distinct and diverse decorations and styles. Perhaps even more interestingly, the Middle Woodland period people began to commonly use exotic stone for their everyday points and tools.



Tanning and curing animal hides was important throughout Vermont's Native American past.



After the Paleoindian period, using exotic stone for tools had become more rare for the Native Americans. People used more locally available materials during the Early, Middle, and Late Archaic periods. By the Early Woodland period, however, exotic materials were showing up in Vermont and by the Middle Woodland period exotic materials were even more popular. What could this mean? It means that the trade routes that were probably started in the Early Woodland period, or perhaps even earlier, were flourishing by the Middle Woodland period, connecting Native American groups across what is now the eastern U.S.

### CCCH Middle Woodland Sites:

Site VT-CH-494 was located on a high terrace near Indian Brook in Essex. Like many of the other sites found during the CCCH planning, this site seems to have been a fairly large hunting camp. Archaeologists found a distinctive *Jack's Reef type* corner notched projectile point at the site, helping them date it to the Middle Woodland period. The site's age was determined even more clearly with charcoal found in a nearby fire pit. A radiocarbon date of A.D. 170 +/- 60 from this charcoal supports the theory that the site was used during the Middle Woodland period.

In the fire pit, archaeologists recovered several hundred bones from different animals. The bones all were from mammals, but most were so small it was impossible to determine the animals from which they came. There were, of course, deer bones. Archaeologists could also see several mink bones among those collected from the fire pit. These Native Americans, like their ancestors before them, were hunting mink for fur. They ate the meat and carefully preserved the fur. Mink and deer bones in the fire pit also suggest that the camp was used in the winter.



Middle Woodland period Jack's Reef projectile point recovered from VT-CH-201, in Colchester.



### Late Woodland Period

**-Time:** A.D. 1000 to the time of European contact, rounded to A.D. 1600.

**-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 as an arrowhead. Many other tools were used for specialized tasks. Pottery was made and used regularly, including some elaborate forms. Perhaps most notably, however, agriculture, or farming, began to be commonly practiced in the Late Woodland period.

**-Food:** A great variety of wild food was hunted or collected by the Native Americans of the Late Woodland period. Plant foods like corn, beans, and squash were grown next to the rivers on floodplains and harvested by Native American farmers.

Several hunting tools, made from a type of stone from what is now southern Pennsylvania, were found at the site. These tools provide archaeologists with more proof of long-distance trade during the Middle Woodland period. They also serve as clues, telling archaeologists that the Native Americans were not only sharing stone, but ideas and beliefs as well.

After so many years of local stone use, long-distance trade during the Middle Woodland period was as much about social connections as it was about getting better stone for tools. These stones must have been important symbols of culture, for communication, or maybe even for expressing spiritual beliefs. The value of exotic stone material likely went far beyond its use for everyday tools. Long distance trade of exotic stone helped the Native Americans keep in contact with their culture and with their belief systems.

### The Late Woodland Period:

The Late Woodland Period, dated from 1,000 years ago (A.D. 1000) to the time of European contact (A.D. 1600), 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, and, helped by the bow and arrow, Native Americans hunted a large variety of animals. They also used different technologies to catch fish and other *aquatic* 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 were definitely living in larger groups around Lake Champlain or in other valleys with good sources of water—at least in the warmer months. From there, they



Late Woodland period  
Levanna type projectile  
point recovered from  
VT-CH-405, in Williston.







This Late Woodland period jar was found in Colchester over 175 years ago.

would scatter widely, often by canoe, collecting resources from a wide area to bring back to these larger base camps/villages.

In these, along the Winooski River on the Burlington Intervale floodplain and along the Missisquoi River in Swanton, for example, agriculture was beginning to be practiced. The staple crops of Native American farming— corn, beans, and squash, were being grown in these valleys, often at the mouths of rivers, during the summer season. Archaeologists think that this early agriculture is more evidence of communication between distant groups of Native Americans, where farming was first practiced. Knowledge about farming probably was passed on to the Native Americans of Vermont through trade networks that linked the people of what is now Vermont with other cultures to the south.

Ultimately, by the time of the Late Woodland period, the 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, Champlain's trip also marked the beginning of new pressures and challenges for traditional Native American life in Vermont.

### CCCH Late Woodland Sites:

During the CCCH excavations, there were eight sites identified from the Late Woodland period. Of these, archaeologists noticed two separate types of sites serving different purposes for the Native Americans. The first were, of course, hunting camps. These hunting camps all were identified by distinctive *Levanna type* projectile points. These small, triangular points are found throughout Late Woodland period sites.

The other Late Woodland sites identified during the CCCH excavations are what archaeologists call base camps. As far as archaeologists know, these relatively large camps or villages are unique to the Late Woodland



Archaeologists excavating at site VT-CH-495, in Essex.





Schoolchildren and volunteers learning how to use transit at site VT-CH-497, in Essex.

period people, and would be a groups' home, most likely for the whole year. In the fall and winter months, families may have moved away from the large fishing or farming base camps in the valleys near rivers and Lake Champlain, into more upland regions with better hunting grounds. Whenever meat was needed, hunters would range out from this small base camp and bring game back.

Site VT-CH-495 was found very near Indian Brook in Essex on a gently sloping ridge area. This site shows three areas where *intensive* activities took place. Archaeologists think that these areas correspond to where Native American houses once stood. Actually, the three areas at this site are very similar and the artifacts that were found in each area look very much alike. From this interesting observation, archaeologists hypothesize

that perhaps the same family came to this spot year after year and set up their seasonal camp, or three related families camped there at the same time. For archaeologists, the annual return by Native Americans to the same spot is more evidence of people establishing more permanent settlements during the Late Woodland period.

At site VT-CH-495, archaeologists found fire pits in two of the three activity areas, complete with fire-cracked rock and burned bone. Pottery sherds also were found in these areas. The discovery of cooking and pottery in these small areas reinforces the hypothesis that the Native Americans were at the site for longer than a few days. This site, then, is much different than most of the shorter-term hunting camps archaeologists find from earlier periods.

There were also large amounts of flakes and other stone tool fragments concentrated in the three activity areas. For instance, at site VT-CH-405, which was the largest, or most heavily used Late Woodland hunting camp found during the CCHH excavations, an average of 73 flakes were recovered from every one meter square excavated, showing evidence of projectile point and other stone tool making. At site VT-CH-495, archaeologists recovered



Schoolchildren and volunteers learning about site VT-CH-201 during an archaeological field school in Colchester.





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an average of more than 475 flakes from every one meter square excavated! Higher proportions of artifacts per square meter is certainly evidence that the Native Americans were at this site for more than a few days, and that there were more people at site VT-CH-495 than just a couple of hunters.

These sites are important for our knowledge of the Native American people. They tell us that the Native Americans were probably coming together in large groups for the summer to harvest crops and fish, and then splitting up in the winter to make smaller camps away from the lower valleys. It also shows archaeologists that game was still central to the Native Americans diet at this time, even though we know that they developed many different ways to harvest food by the Late Woodland period.

Archaeologists know from elsewhere in Vermont that Native American society became more complex during the Late Woodland period and that one or more cultures may have lived in the Champlain Valley. Some of these people likely became the Western Abenaki and perhaps the Mahican, two Native American groups known historically in Vermont. Ultimately, European settlers came to the area by the mid-later 1700's.

Today, there are still Native Americans living in Vermont. They never left. Native Americans have been living in what we now call Vermont for more than 11,000 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 110 centuries.

**For more information on Native Americans living in Vermont today contact:**

- 1. Abenaki Nation of Mississquoi, 100 Grand Ave, Swanton, VT 05488 (802)868-2559**
- 2. Abenaki Tribal Museum & Cultural Center, 100 Grand Ave, Swanton, VT 05488 (802)868-2559  
[www.abenakination.org](http://www.abenakination.org)**
- 3. The Vermont Folklife Center, 3 Court Street, Masonic Hall, Middlebury, VT 05753  
(802)388-4964**





## Chapter 5. Why is Archaeology Important?



Visitors learn about archaeology and site VT-CH-201, in Colchester.

From the time that Native Americans first entered Vermont up to the present day, a period that spans almost 50 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, fell, and rose 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 what is now Vermont was 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 Chittenden County 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, tells us this is so.

At certain periods of the past, the CCCH highway corridor also was used by Native Americans for a variety of other purposes. Archaeology for the CCCH helps us better understand not only the human history of Chittenden County, but that of Vermont and the broader region as well. In the Early Archaic period, for instance, there were once camps set up in order to harvest specific trees. At other times, the same areas were used to forage for wild plant foods. In still other periods, the winter drew people away from low river valleys and Lake Champlain into the forested upland areas to hunt, build base camps, or more temporary seasonal camps.

Although almost none of the clothing, baskets and other organic items that the Native Americans made and used have preserved to be studied, archaeologists can still discover and



Volunteers learning how to excavate at site VT-CH-201, in Colchester.







Archaeology campers excavate at site VT-CH-201, in Colchester.

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 hypothesize about 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.

Well, now you know a little bit about Vermont's Native American past. This is not the whole story, however. Many books remain to be written about archaeology in Vermont. With more sites, more information and more study, we can all learn a great deal 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 non-renewable, 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. Archaeologists interpret these stories for all of us, and for people in the future.

Of course, it is impossible to study or preserve every archaeological site in the ground. Roads, bridges, and even highways must eventually be built or rebuilt, and construction will eventually have to be done in certain areas. However, we must all be responsible for these sites that tell us about our past as Vermonters, and as humans. Each site lost is a story about our shared past that will never be told.

The government, and the planners of the CCCH know this, and worked together with archaeologists to make sure that any sites that would be destroyed by the building of the CCCH were properly excavated, studied, and recorded for the future. When archaeologists and builders work together, we can be sure that the past is being cared for, even as we build for the future.



Archaeology campers screening at site VT-CH-201, in Colchester.

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For more information about archaeological research in Vermont and/or other states, please contact:

#### Vermont Archaeology

The Vermont Archaeological Society, P.O. Box 663, Burlington, VT 05402-0663,  
<http://www.vtarchaeology.org>

Vermont Division for Historic Preservation, National Life Building, Drawer 20,  
Montpelier, VT 05633 802-828-3211, <http://www.historicvermont.org>

#### American Archaeology

Society for American Archaeology, 900 Second Street NE #12, Washington DC,  
20002, <http://www.saa.org>

#### Other Web-Links & Sites

Lake Champlain Maritime Museum, <http://www.lcmm.org>

Robert Hull Fleming Museum, <http://www.uvm.edu/~fleming/home>

University of Vermont Consulting Archaeology Program, <http://www.uvm.edu/~uvmcap>

Vermont Agency of Transportation, <http://www.aot.state.vt.us/archaeology/design>

Vermont Historical Society, <http://www.state.vt.us/vhs>





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## Glossary

**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.

**Aquatic-** any plant or animal that grows and lives in the water.

**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.

**Artifact migration-** The movement of artifacts in the soil as a result of natural processes such as freezing and thawing, root activity, rodent burrows, worms, etc.

**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.

**Brewerton type-** medium sized, broad, thick side-notched projectile point with "eared" base. Recovered from Late Archaic period sites (ca. 4000-2500 B.C.).



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**Chittenden County Circumferential Highway-** a major highway project undertaken in Chittenden County by the Vermont Agency for Transportation and the Federal Highways Administration. It will run around Burlington, through the towns of Colchester, Williston, and Essex. This highway will relieve traffic, and make neighborhoods and residential streets safer. The archaeology discussed in this book was part of the studies required as part of the permitting process for the highway, mandated under Section 106 of the National Historic Preservation Act of 1966, as amended.

**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.

**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.

**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.

**Estimation-** an approximate calculation; an educated guess.





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**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.

**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.

**Extractive camps-** archaeological sites used while Native Americans harvested or quarried specific resources, like a particular type of wood or stone.

**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.

**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.

**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.

**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.



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**Game-** prey; animals that are hunted.

**Genesee type-** large sized, thick projectile point with a straight-stemmed base. Named after the Genesee Valley of New York where this type of spear point has been recovered from Late Archaic period sites (ca. 4000-3000 B.C.).

**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.

**History-** the study of the past through the writings of those that recorded the events of their time.

**Holcombe phase-** medium to large sized, pentagonal-shaped projectile point with straight base. Named after the Holcombe site in Michigan and dated to the Late Paleoindian period (ca. 8000-7000 B.C.)

**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-** to piece together clues to arrive at an understanding of something; to explain the meaning of.

**Jack's Reef type-** medium sized, broad, thin, corner-notched projectile point characteristic of the Middle Woodland period (ca. 100 B.C.-A.D. 1000). 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).





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**Levanna 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.

**Mandate-** an official order, in this case, from the United States Government.

**Marten-** a small, slender carnivorous animal with long thick fur.

**Mastodon-** 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 type-** medium sized, thin, side-notched projectile point associated with Early Woodland period sites (ca. 1000-100 B.C.) across a broad portion of the northeastern U.S., including Vermont.

**Micro-organisms-** 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.

**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.



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**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.

**Otter Creek type-** large sized, thick narrow, side-notched projectile point. Named after the Otter Creek in west-central Vermont where this type of spear point has been recovered from Late Archaic period sites (ca. 3600-2400 B.C.).

**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 least 12,000 years ago. The first Vermonters were Paleoindians and they arrived about 11,500 years ago, or about 9500 B.C.

**Paleontologist-** a scientist who studies the fossils of animals, including, fish, mammals, and reptiles such as dinosaurs.

**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.

**Precipitation-** rainfall and snowfall.

**Prehistory-** the period of the past before written records, typically studied through the science of archaeology. In this case, the word means *precontact*, 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 and things associated with it are).





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**Records-** paper notes, photographs, maps and other documents 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.

**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.

**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/units, artifacts and features.

**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.

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

**Technique(s)-** a special skills or ways of doing things or that enable one to perform a task or job.



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**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.

**Tundra-** open treeless grassland characteristic of Vermont's landscape following the last Ice Age.

**Utilized flakes-** flakes or stone chips that were used as tools after being broken off a larger piece of stone. Such tools are typically used for a specific purpose requiring a sharp edge such as cutting or scraping.

**Vergennes phase-** a Late Archaic period archaeological culture (ca. 3500-2500 B.C.) 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.





## An Introduction to Vermont Archaeology: Native American Archaeological Sites and the Chittenden County Circumferential Highway

Native Americans have been living in what is now Vermont since the end of the last Ice Age some 12,000 years ago. Archaeology is the science that allows us to learn about Vermont's Native American past through the excavation, analysis, and interpretation of cultural materials that preserve in the ground.

This handbook represents one component of public outreach for archaeological studies undertaken by the University of Vermont Consulting Archaeology Program (UVM CAP) in advance of the Chittenden County Circumferential Highway (CCCH) in Colchester, Essex, and Williston, Vermont. The archaeological research that forms the basis for the text and the production of the handbook itself were made possible through the support of the Vermont Agency of Transportation and the Federal Highways Administration.

Highway planners worked together with UVM archaeologists to make sure that any Native American archaeological sites that would be destroyed by the building of the CCCH were properly excavated, studied, and recorded for the future. When archaeologists and builders work together, we can be sure that the valuable evidence of the past is being cared for, even as we build for the future.

