

## QUEST #605

### *Archaeology*

(Jim Petersen)

Archaeology is the study of human behavior in the past. It can be historical or it can be pre-Columbian or prehistoric as we say sometimes. So here in New England we cover 11 thousand plus year time span when we study archeology.

(Dick Boisvert)

How do we take a few bits of stone and turn it into a cultural interpretation? That's very tricky; it's what we strive to achieve in our discipline. What we do is look at the tools, first in their context. Are they all of the same type in one place? Are they all made out of the same kind of material? Do they have an interesting distribution in the site where only the scraping tools are in one place and only the spear points are in another? We look at the context first.

(Bob Bartone)

... if I find one flake. If you keep in perspective what that flake represents it's still exciting to me to know that someone left that flake behind. Someone was standing here. It could have been 1,000 years ago- it could be 5,000 years ago. It could have 10,000 years ago. Someone was standing right in the same spot I'm standing in and left this behind. And that to me is pretty exciting. So it's easy for me if I'm out there day after day working, digging and screening and putting flakes in a bag to lose perspective but I keep it in mind and it's still exciting.

(Linda Greenlaw)

Wow, school kids must love this.

Hi, I'm Linda Greenlaw. I'm here at the Abbe Museum in Bar Harbor, Maine. They have an amazing collection of artifacts at this museum, many of which were discovered by Archaeologists.

Archaeologists are social scientists. They employ a systematic methodology and use material evidence, such as these artifacts as their guide, to interpret human life and culture.

Through their efforts we have a greater appreciation of the past. And a broader understanding of the people who came before us.

(Narration)

Hutch McPheters and Bob Bartone are archaeologists from the University of Maine at Farmington.

They have trekked across Northern New England's Route 2 and then down into the Lake Champlain Valley to reach Cornwall, Vermont.

Hutch gathers the crew to begin the day's work. They are here to excavate a Native American habitation site which looks to be around the time of the Late Archaic Period. About 6,000 years ago.

(Bob Bartone)

The University of Maine Farmington works on a regular basis with the agency of transportation highway department in Vermont as archaeological consultants.

(Narration)

The site they are excavating is known as the Foote site. It has been named the same way that most archeological sites get named -- after the land owners. It is one of two archeological sites that have been identified on either side of the Lemon Fair River.

But the river does not want to reveal the story of its past without a struggle.

The team has been presented with many challenges; swarms of mosquitoes, and sticky clay.

By this time in the project, they were hoping to be further along.

(Hutch McPheters)

... The unique thing about this site to me personally is the thing that made it so difficult in the first place, the clay, the managing of the clay, trying to reach the deadlines and stuff like that.

(Narration)

Their determination hasn't diminished. They push on -- forging forward in an attempt to sort out the hidden past of the people who once encamped here.

(Narration)

Nestled in the White Mountains, New Hampshire's State Archeologist, Dick Boisvert is also looking to get his own crew down into the dirt.

(Dick Boisvert)

Archaeology is an extraordinarily labor intensive research. Archaeologists travel in packs and for good reason -- it takes a lot of people to excavate even a simple 2 meter square. So we need a lot of help to do this. If we were to pay for it -- it would be extremely expensive.

(Narration)

One of the archaeologists Boisvert has invited on this dig is Claude Chapdelaine from the University of Montreal.

(Claude Chapdelaine)

I'm from the University of Montreal, I'm a teacher there of archaeology, Northeast Archaeology. I'm here with 13 of my students. It's a very early site probably dated to the

ice age or the last period of the ice age. It was the oldest human occupation that you can find in Quebec or here in New Hampshire... So it's very exciting for us to share these great moments of discovery of the early or first American because it's very, very special, very unique. Because there's not too many sites of that time period. So that's why you will see so many people coming here this weekend. It's big time. It's Prime Time for us.

(Narration)

Paleo-Indians were the first humans to inhabit North and South America. This site is even older than the Vermont site – possibly 11,000 years old.

(Narration)

Archeologists dispute exactly when and how the first people, the “Paleo -Indians”, came to the Americas.

(Dick Boisvert)

It looks to me like it could be here by glacier.

(Narration)

What is known is that about 20 thousand years ago, at the height of the Ice Age, Northern New England was buried under a dense layer of ice.

(Bob Bartone)

At the time of the last glaciation much of Northern New England was covered by a 2 mile thick ice sheath. That glacier, the weight of the glacier had the earth's surface compressed and also was locking up a lot of substantial amount of the world wide water supply...

(Narration)

Since much of the world's water was tied up in the Glaciers, the bottom of the Bering Strait became exposed and a land bridge was created – connecting Siberia to Alaska.

For many years it was widely accepted that the first Americans, the Paleo-Indians, used this route to populate North and South America.

But those assumptions have been challenged.

(Bob Bartone)

The peopling of the Americas is a very interesting and contentious issue. The most widely held belief is that people came across the Bering Straits, the Beringa from Siberia to Alaska a land bridge was opened thru the ice which would have afforded an opportunity for people to migrate from Siberia to North America following game or what not – but it's a very contentious issue.

(Narration)

A contentious issue because there is growing evidence that ancient people existed here long before an ice free corridor connecting Siberia and Alaska ever existed. Maybe as much as 40 thousand years ago.

(Bob Bartone)

... in the Northeast we don't really deal with that issue because we know that people were well established in the Americas prior to the inhabiting of Northern New England because we were under at least a 2 mile ice sheath and there just couldn't have been people there.

(Narration)

As the huge glaciers thawed and ice began to retreat, the landscape of Northern New England changed.

In Vermont, a huge body of water known as Lake Vermont was created by the glacier's melt water.

The melting of the glacier continued for thousands of years. Eventually receding beyond the St. Lawrence Seaway.

Ocean water from the Seaway began to pour into the carved area left by the glacier's path -- until its salty fluid overflowed into Lake Vermont.

This new saltwater sea replaced the lake. And a new body of water named the "Champlain Sea" was created.

Over time the land would rise again, once more cutting off the ocean and developing into today's Champlain Lake and Valley.

(Narration)

In 1849 railroad workmen digging in Charlotte, Vermont discovered under 8 feet of soil, the bones of what they thought was an odd looking horse.

A local resident came upon the strange remains and called in Zadock Thompson, a professor of Natural History at the University of Vermont.

By the time Thompson arrived on the scene the remains were damaged.

Returning to his lab at the University, Thompson reconstructed the animal as best he knew how. He concluded that rather than a horse, this creature, 150 miles away from any ocean, was an ancient ancestor of the modern Beluga Whale.

(Bob Bartone)

When the glacier melted or the glacier retreated two things happened the land was depressed and all this water was freed there was what's referred to as a marine invasion the ocean levels was much higher and the ocean shorelines were in the interior.

(Narration)

The Charlotte whale is evidence of this long ago geological event.

Thompson using the best scientific techniques of his day carefully dipped the remains of the whale into “animal glue” in an effort to preserve them.

The front shoulder blade and some of the ribs are placed in the wrong positions.

Contamination from the “animal glue” has made it impossible to carbon date the specimen.

Because of the glue, the true age of this post-glacial whale may never be known.

The whale’s skeleton is now considered important for its historical significance, rather than for the anatomical accuracy.

(Narration)

In Randolph, New Hampshire Dick Boisvert has had his team up and running all morning.

Shovel test pits are being dug to try and find the sites boundaries.

(Dick Boisvert)

Physically, this site is complicated to investigate. It’s large but it’s patchy. We have a few artifacts here, a few artifacts there, I have yet to see any specific pattern that every so many meters we’re gonna find another hot spot. I haven’t found that yet. It looks almost random. So that’s makes it difficult cause we’re looking for a lot of little things in a very large space. We’re looking for something the size of a postage stamp in the area the size of a small house. That’s not easy.

(Dick Boisvert)

And it’s difficult to just go in a straight line very far without encountering a lot of trees. The solution is to get out your chainsaw and clear a swath through the woods. This is time consuming. It adds yet another task to the investigations. I’ll confess I’d be a lot happier if we were out in a nice pasture, life will be a lot easier.

(Dick Boisvert)

Okay this is a triangular spurred in scraper made out of Munsungan. This is pretty much classic. You can see where the spur is busted off right here. This is just as nice as they get.

...we know they’re hunting things. They are sticking pointy hurty things into Caribou alright. That’s not news – but what they’re doing with the scrapers we don’t understand nearly as well. To understand what is going on with Paleo-Indians we want to know what they’re doing besides killing the animals. So I’m really interested in getting the scrapers. The points are nice, they’re pretty, people like to see them. Everyone gets excited about museum quality and so forth. But I think the information in the scrapers may actually be more powerful.

(Dick Boisvert)

What is this site all about? I wish I knew. The fact that I don't know is why I'm here. We have a very large site on this very interesting landform. It's by an ancient pond. And it was occupied approximately eleven thousand years ago, give or take a little bit.... I want to know why did people come to this spot. And once here, what were they doing? And then how were they connected to the other Paleo-Indian sites here in Northern New England? All of these questions sort of work on each other, it's not one question. They're all related one to another.

(Narration)

Because of their age, Paleo-Indian sites are rare and exciting discoveries for many archeologists.

This particular site is only open for twenty-five days this year. It is a unique professional opportunity for many of them.

(Man)

You've got to be kidding me....

(Woman)

It's getting lighter as we look at it...

(Man)

The soil or the coloring of the stone...

(Woman) The coloring of the stone... What do you think?

(Man)

Uh – nothing

(Woman)

You've got flakes in a bag...

(Dick Boisvert)

I have volunteers from the University of Montreal. State of New Hampshire and the Province of Quebec have a cultural exchange program. We've been working with them on this exchange program since 1992. In the last 3 or 4 years we have been exchanging information and crews on Paleo-Indian sites.

..We have people from Connecticut, from Rhode Island, from Maine from New Hampshire, who do this for a living but they're coming out to give me their services for a volunteer today...

...We also have quite a number of contract archeologists. These are people who do archeology for a living, the environmental impact kind of work done in advance of projects that may disturb or destroy a site...

... We have a wide variety of people who are volunteers. I have retired military, I have women who taught on a Hoppe reservation, we have “housewives” who are probably our most powerful and sophisticated excavators.

... We have just a remarkable breadth of people here, and they’re here because they think this is an important site, and they want to learn something, and they would like to be a part of this discovery.

.. People have because of their great interest in archeology come out and volunteered to work with me, and put in phenomenal amounts of effort on these sites.

(Narration)

The work is hard and laborious.

Most of the test pits in this area of the site are coming up empty.

(Narration)

In Cornwall, Vermont Bob and Hutch have already dug their share of test pits at the Foote site.

(Bob Bartone)

this is a relatively large excavation for Northern New England. We’ll start off with small units spaced across the landform, and then based on that we’ll know where there’s archeological material or cultural material. And from there, based on that information, we’ll dig a series, you can see these excavation units that are deeper than the surrounding block, these are actually ones we did last year. We’ll get a handle on the depositional history, maybe what the types of artifacts are, what the artifact-densities are, what the stratigraphy or the natural soil layers are, and then based on that, we eventually will expand. ...to a larger excavation where we’d get a whole other level of type of information like activities and what not.

(Narration)

The Foote site shows evidence of a Native American encampment.

In 2000 a large roasting pit, stretching over 30 feet was uncovered.

(Hutch McPheters)

The soil here is verily darkened, it’s burnt, black, it’s got charcoal in it – it’s charcoal-infused. You can notice the soil here is much darker than the normal subsoil like here I have in my left hand. The sub soil here is like a light olive. You can compare the two you can see the burning has altered the soil cause of the organics within it and those organics are what we are really trying to recover within the site. We definitely know if something’s occurred here culturally or naturally. It sticks out like a sore thumb especially if it was all nice and clean scraped down you could really get a nice definition from the subsoil to the cultural feature.

(Narration)

This roasting pit is an important discovery that provides many clues about the people who once lived here.

(Bob Bartone)

It's a multi-component site, which means that Native Americans lived here over a long expanse of time beginning at least 6,000 years ago right up to the time of the European contact in 1750. So we have a long sequence of occupation here. It's also important and relatively unique because of the intensity of habitation. We have extremely high artifact densities that people were engaged in some intensive activities here as far as processing plants and animals for their own subsistence making stone tools, cooking food, hunting food, and a variety of other activities.

(Hutch McPheters)

The intensity and size of this roasting pit is very large. It's one of the biggest we've ever excavated. Maybe the biggest in Vermont. The intensity of fire-cracked rock, the intensity of the burned charcoal it's very uncommon. It's a rare find.

(Bob Bartone)

Fire cracked rocks are one of the more common artifact types that archaeologists find and once you've looked at 'em a little bit and try to understand what they are and how they were made it becomes fairly recognizable. At first walking along if you're not used to seeing them you might just think that's just a rock on the ground that it's not an artifact type. But as an archaeologist walking along it's something that we key into and it's an indicator that people were there.

(Narration)

Fire Cracked Rock or FCR is an important indicator to archeologists that some kind of human activity involving fire hearths may have been happening in an area.

(Hutch McPheters)

This is a typical fire cracked rock. It's very distinguishable between a normal rock. It's very angular in the way it's been broken. You can see the redness, heat altered surfaces black here, red over here. It's very distinguishable between a normal rock. You can see what a large concentration we have of them here. It's not a normally recognized artifact but it is to the trained eye it's very distinguishable and often associated with these fire hearths or pits.

(Narration)

But Fire cracked Rock is not all they are finding.

(Bob Bartone)

We're also finding a lot of charcoal and we're also finding chips from making stone tools and in the surrounding areas also stone tools themselves broken and also some complete ones.

We've haven't completed our analysis yet, but we hope to find out what food they were processing through this intensive activity.

(Narration)

But finding all of this evidence hasn't been easy. One of the hardest obstacles for The Cornwall team to overcome is the dense clay the artifacts are embedded in.

(Hutch McPheters)

I felt I was behind schedule, a lot, which we were and trying to pick up the pace, trying to analyze what's going on a daily basis and try to figure out how we can make it more expedient.

(Narration)

The clay is Vergennes Clay. A thick, viscous clay that is stubbornly sticky when wet and hard as a rock when dry.

It was deposited here by the same sea the reconstructed Charlotte whale once swam in.

(Bob Bartone)

Typically as archaeologists— we find archaeological sites in a whole variety of settings. It could be on old glacial tills – rock deposits. It could be on a sand beach. It could be in a sand dune out west somewhere. It could be in a cave or a rock shelter – could be along a riverbank

It's very easy to separate the archaeological material from the surrounding soil matrix – the sand – archaeologists use screens to do that. You can put pass sediment through a screen the sand drops out and the artifacts and other larger rocks are left behind. With this clay – it's so fine and so cohesive that the clay could be put into a screen and it doesn't go through the screen. Even if you were to push it through that might be you know destroy certain artifact types so we have to have other ways to separate the artifact from the clay.

(Narration)

After some trial and error and much frustration, the Cornwall team finally came upon a solution. They would soak the clay sediment in a baking soda and water solution to break down the clay before they attempted to screen it.

They could use this method right there, at the site, in the areas which yielded artifacts larger than the holes in the screens.

(Narration)

But in areas, like the roasting pit, where tiny fragments of bone or seeds could be lost, the soil needed to be painstakingly scraped and collected. It is then placed in bags to be taken back to the lab in Farmington, Maine along with the rest of the found artifacts for further investigation.

(Bob Bartone)

We're learning that people were there over an extended period of time and we're trying to isolate those different occupations so we can have a sense of issues of continuity and change over time which is important to us.

(Narration)

All archeologists agree that it takes more than just one site to get a clearer picture of the past.

Back in New Hampshire, Dick Boisvert's morning just got better.

(Dick Boisvert)

Someone bring me a digital camera.

We're trying to figure out what people were doing here. If for instance we have pieces of a point that was broken that all fit back together and they were all found within say give or take 3 or 4 centimeters of depth that would suggest we might have a living floor here. The other things found at the same depth could be associated with that event. So that would give us a chance to understand not just the fact that they had a broken artifact but how it got broken, what was going on at the same time or close to it. If we find the broken artifacts at vastly different levels it may tell us that there's been a lot of disturbance in the site and that we can not under any circumstances trust what we have at the same level if two pieces fit back together that were found at depths maybe 50 cm different in depth. So it gives us an opportunity to understand the integrity of the site. In other words is the site undisturbed and everything very much in place where it was left however many thousands of years ago or has it been turned up a good deal. So if we had two close together that fit back together that would be really nice. We would have an area we might have a living floor. Those are very, very rare. It looks like this is not going to fit back on it - could be just one that didn't work out. To be perfectly honest we have many, many more of these than the happy events when they fit back together. But you have to treat each one as though it's going to be that way until you can prove otherwise.

(Dick Boisvert)

Pinch it in and pull it out – Claude have you seen anything like that?

(Claude Chapdelaine)

No – it's too big...

(Dick Boisvert)

I'm not quite sure yet- it's a large flake- looks like it's been used as a cutting tool – almost like a blade...

We've been accused of being too focused on the spear points to the exclusion of looking at the knives, the scrapers, the other kinds of tools. And that's a reasonable criticism, at least it was maybe ten or 20 years ago, I think we've caught up today. We're now putting much more interest on the scrapers, on the knives, on the engraving tools, and so forth. But the fluted points, they give us that interest in the hunting. From there we take it into

what kind of animals were they hunting. Here in New England, it appears to be caribou, in other parts of the country it was bison, the Folsom peoples were hunting giant bison – they are 4 to 5 times the size of the modern bison, and they were bringing them down with spear points that weigh three grams, fluted points that weighed three grams. And that’s impressive.

(Narration)

The Paleo-Indians have the reputation as ‘big game hunters’.

In 1959, while digging a farm pond, the remains of a Woolly Mammoth, an extinct relative of the elephant, was found in Scarborough, Maine.

This young female died of unknown causes but archeologists know that huge animals such as mammoths and caribou were hunted by the Paleo-Indian people.

But how, with such primitive tools and means could such large game be brought down?

(Jim Petersen)

The spear thrower or atlatl as it’s known in Aztec was a, was a very, very significant innovation in the broader span of human history and pre-history, dating back almost 30,000 years ago ...

(Narration)

This spear throwing device is called an atlatl. It was used by pre-historic man in Northern New England and throughout the world to kill big game and other animals.

(Narration)

Throughout Northern New England competitions like this one, have been keeping this ancient skill alive.

(Jim Petersen)

... it’s one of those things that enables people to sort of participate in the past if you will. The atlatl competition held here in Vermont and elsewhere in the region is one thing that enables participants young and old to connect with their ancient origins. Many people don’t realize that the atlatl is a common invention that we all shared in some thousands of years ago, our ancestors did, I should say. So I think that’s part of the attraction. It gets us involved that we’re doing something. We’re not necessarily digging up the past to better understanding in that fashion but like other branches of experimental archaeology where we take an ancient technology, recreate it in the present. We’re better able to understand that technology and also have a little bit of fun at the same time.

(Maureen Searle)

Oh, absolutely I think everyone is doing their best and this is a great activity. I encourage everybody to do it. It’s a link with the past, it’s educational, it’s just a lot of fun. A lot that ya learn. A lot of nice people that you meet. I can’t think of a much more fun sport (laughs) to take part in. I really can’t! It’s great!

(Narration)

Bob Berg is a craftsman and instructor who designs and teaches about atlatls and dart making.

On the day before the competition he passes on some of his knowledge to a couple of home schooled children and others interested in this ancient weapon.

(Bob Berg)

In a typical workshop the first thing we try to do is to get the people to have at least some rudimentary equipment – 3 darts and an atlatl. In the process of making the darts I go through a lot of other things like cordage making and flint napping and a discussion on how atlatls are used and what they use to be used for and what they can be used for now. And give ‘em some idea wants going on in the atlatl world and give them some place to start. Some of the people we had here yesterday were home schoolers and they’re actually using it to, to further their education.

These simple rudimentary foundation skills that humans all use to have to have have been totally forgotten and somebody has to carry this stuff on and if I can teach it to a few kids at a time like this at least somebody knows how to do it, you know. It’s, it’s actually important information.

(Jim Petersen)

Atlatl technology is one of the greatest innovations of all time. Probably akin to farming. Atlatl technology enabled people who had it, to throw a spear farther, faster and more accurately than they ever could before.

Before the invention of the atlatl they needed to be close to their game, quarry, the things they were after to eat. But with the invention of the atlatl for example they could take game at a distance of two and three hundred feet. It was a phenomenal revolution.

(Narration)

At the competition, contestants young and old compete in both accuracy and distance trials.

(Greg Mower)

One thing, was kind of fun about today I arrived and I, I met up with some, some little, little guys, I think they are 8 and 9 years old and they are being home schooled and their mom thought this would be an interesting part of their education. So she got the kids involved in the workshop yesterday and so they came down here with 24 hours of experience as far as throwing the atlatl and they were doing about as well as somebody who started yesterday could do. And so I took one under my wing and another gentleman helped out a little bit and we gave them a few pointers. And then maybe a half hour later we were in competition with these little guys and one of them threw a bull’s eye at the targets you see behind here. And there is a certain amount of pride in having

taught the little guy but there's also a little bit of jealousy that he performed better than we did, today.

(Narrator)

Because of the evidence that archaeologists uncover, new insights and a deeper understanding into the sophistication of these ancient cultures have begun to emerge.

(Dick Boisvert)

We seem to think that we have got the key to understanding science and physics and mathematics and use all that to achieve our goals today. But people in the past had a very sophisticated understanding of what boils down to physics and how to use simple tools to get tremendous impact. If you simply extend your arm one more length with a hook on the end of a stick and put the proper proportions to this throwing stick, typically called atlatl, you can get phenomenal fire power.

(Narration)

Throughout Northern New England, there is an ongoing exchange of vital information between the public and archeologist.

At Cornwall, some local residents have stopped to look at what's going on at the site and to share some artifacts of their own.

(Bob Bartone)

Our archaeological projects in Vermont, and Maine and New Hampshire particularly high visibility ones like for the highway department on the side of the road generate a lot of interest from the general public.

(Archaeologist)

Whach ya got there?

(Man)

These are some artifacts that we found on our farm land near Otter Creek.

(Archaeologist)

Wow, look at that. Look at what they have here. See this Bob.... here we've got all kinds of material here. We've been having quite a few local collectors come and share some of their artifacts with us. This is really neat because we can actually see what kind of range of artifacts they've been recovering from the area. Well these are exciting kids aren't they?

(Young boy) ... um hum

(Bob Bartone)

people like to know about the past particularly in their own back yard so a project like the Cornwall project we got a lot of visitors and a lot of people interested in the site and interestingly it was people not only interested in learning what we were learning, but also sharing information that they had with us...

(Archaeologist)

Here we have an Otter Creek projectile point that dates back to about 6000 to 3000 years ago. We can tell that by the base and how the notches are right here.

(Bob Bartone)

Collections like these are really important because we can only do so much as just archaeologists. When we have a carefully controlled excavation like this where we find material and then something like this that we see we can surmise that something similar might have been going on where these were found.

(Hutch McPheters)

These people have been able to walk these plowed fields over and over. So they can bring in a lot of stuff that we probably wouldn't find in a normal situation.

(Archaeologist)

What we would like to do maybe is we'll take some photographs of this and maybe we'll record some of the information maybe where you found some of the material. So we can actually know where some of this material came from and record it on the state files.

(Hutch McPheters)

Everybody that stopped by had a story about when they were kids collecting shoe boxes of projectile points, arrow heads throughout the region. A lot of them were more were willing to bring them in to show us and that was a great experience.

(Man)

Are those all the same age approximately?

(Archaeologist)

No, it's almost the same as this site here. Probably the range is 6,000 to 3,000, almost the same age as the site that we're dealing with right here.

(Narration)

Without a doubt archeologists seem willing, even eager to share their findings and information with the public. But occasionally it has come at a cost for them.

(Dick Boisvert)

There's a crisis in archeology in America today. Archeological sites are a limited resource. We're not making them, we only find them. There has been a growing interest in things old, and it's not all archeological. Unfortunately, there are people who will go in and steal artifacts from sites, even steal them from laboratories, who look at antiquities as either a curiosity to collect and hoard or something to sell on e-bay. And we have a

tremendous problem distinguishing ourselves to the public, the difference between a scientist, a social scientist, who's trying to understand how people behaved in the past, how to understand their cultures, and the people who want to collect something that's collectible either for the pride of having found it or owning it or to buy it and sell it...

(Narration)

But on this fine day the New Hampshire crew has other things on their minds.

(Man on the crew)

Oh yeah – there was a stump here –

(Dick Boisvert)

That was under the stump?

(Man on the crew)

Yeah...

(Dick Boisvert)

laughs, claps his hands

(Man on the crew)

See we've got this right in through this area...

(Dick Boisvert)

Pull it out – pull it out...

(Dick Boisvert)

It's a tradition – you find a fluted point – you get a kiss from me...

(Narration)

Fluted points of Munsungun chert are rare finds and tell tale signs of Paleo-Indian site.

(Dick Boisvert)

Why is munsungun chert so important to us? The reason is that it is a kind of stone, kind of chert, it's like flint, that is very distinctive. We can recognize it fairly easy, which is not true for all cherts. It comes in some very nice red, red and green, and one variety of black with dark grey. It's very distinctive. But more important than being identifiable is the fact that it, apparently, was one of the key kinds of stone used by Paleo-Indians. We can look at a tool and see how far long in the manufacturing process it is. In the same way that we can look at a pile of lumber, a half-made chair, and a finished chair, we know how far along the process is to make it. We can do pretty much the same with stone tools. And we see them only in the final form, or sometimes just reworked forms, the further away we get from the source, usually.

(Dick Boisvert)

They're trying to shape that and they blew it...

(Claude Chapdelaine)

They were practicing...

Dick: That's a fluting blow – but they were using it as a knife before they were... This was a knife before it was ... before it was turned into a point – I think ....

(Dick Boisvert)

We use the munsungun as a way to trace the path of the people through the past. We can use that to literally track them across the countryside. And it's not just a matter of we just connect one dot to another in a straight line and there's nothing else, if we ask the right kinds of questions and look at the tools and see what stage in manufacturing they're at, what variety they are, other more complicated questions, we can tease out even greater information and provide a lot of detail to those paths across the landscape. So that's the real reason why we're interested in munsungun. We can identify it, it was favored, it allows us to trace their movements across the landscape.

(Dick Boisvert)

Pull it up – look over at me – That's it – excellent...

(Man on the crew)

That's a fluted piece?

(Dick Boisvert)

Yeah...

(Man on the crew)

Is that Munsungun?

(Dick Boisvert)

Yeah....

(Narration)

The Munsungun Lake area is located in Maine north of Mount Katahdin, about 300 miles from where Dick Boisvert's crew is excavating.

(Narration)

This beautiful rugged region of tranquil lakes and craggy hills is the only area that produces this high quality, prized stone.

(Dick Boisvert)

Why did they want munsungan at all? It's a pretty simple answer. It's about the best you can find. High quality stone was essential for making the kinds of tools the Paleo-Indians were using. You can think of many of their tools as being the equivalent of a Swiss army knife, having lots of different functions in a small compact package that you can carry with you and use for all kinds of different things. One of the keys to munsungan and the

other high quality cherts is the fact that you can re-sharpen the tools, you could take off just a little bit of the tool along the edge and restore the dull edge to a sharp edge. Some materials are just not as fine-grained that when you try to trim them, you end up taking way too much. And you may be able to re-sharpen some of these other tools only once or twice in its use life, whereas a munsungun tool may be re-sharpened eight or ten times. But if you can increase the rounds of re-sharpening by a factor of four, this is a tremendous advantage, particularly if you only get to the sources every now and then. So it's the quality of the material that makes it very attractive. That appears to be the key. And this pattern plays out across the entire continent. We see this happening in other parts of the country where we will find tools made out of very specific kinds of stone traveling hundred, and sometimes thousands of miles across the landscape. It may very well be that this kind of stone is viewed as being the proper kind of stone, the right kind of stone. And that if you're going to hunt, you have to use the right material. Brand loyalty, if you will. But it may also elevate to an ideological level. It may be that the spirits of the animals will be pleased only if you use the right stone. So it isn't just hard, economic or functional aspects that apply, it may be others as well. And maybe they work in concert.

(Narration)

A find like this inspires the team to keep going.

And on this lucky day, it is not long before the New Hampshire crew strikes it big again.

(Dick Boisvert)

This is the first piece found and these two other pieces here came afterwards. So you can see that this is part of it. This broke apart maybe 11,000 years ago a little bit more, now we've got it back together. The crew that dug it did it the way we want it done. They found each piece. They plotted even this insignificant little piece right here which looks like nothing. So we now know where the pieces were and we can draw the lines to put them back together again. It was what I was hoping we could do over there we've accomplished it here for this end scraper.

(Dick Boisvert)

Finding out something that no one has known for a thousand years. We come out here and we know there's a site here but we have so many questions. We don't know the answers. And we get to go and explore and find the artifacts and hold in your hand an artifact that hasn't been held for eleven thousand years. And then proceed to put the puzzle back together again. And sometimes it's tedious and there's an awful lot of blind ends. You follow something up and it just ends up, it's nothing important; it's a natural feature. But you get a chance to solve some puzzles, very interesting puzzles. And you get to be the first one to look at something in thousands of years. And that's a real thrill.

(Claude Chapdelaine)

Thank you again for inviting us – to sharing the site with us...

(Dick Boisvert)

My pleasure – my pleasure...

(Claude Chapdelaine) I hope we'll be invited next year again...

(Dick Boisvert)

Absolutely, we'll see you in Megantic, see you in March....

(Dick Boisvert)

How long will I work on this site? Probably the rest of my career. Will I be out here excavating for the rest of my career? Probably not. There's an old saying, "If you want to hear the gods laugh, tell them your plans." My plan is to come out here, at least next year, do a little investigation, probably along the order of what we've done over this long weekend, and add to the knowledge that we have, answer the questions that have developed...

(Narration)

Dick Boisvert's field work on this site has come to a close for this year.

(Narration)

The Cornwall team has also closed up their Vermont field work for the season.

But back at the University of Maine at Farmington, some would say that their work has just begun.

(Bob Bartone)

...to really stick with archeology and become an archeologist you have to embrace you know, the laboratory side of it and really be interested in the people that you are trying to figure out or trying to study... It can be a somewhat monotonous or arduous task. We need to know what we found so the artifacts are catalogued and incorporated into a database.

(Narration)

The sediment from the roasting pit is soaked in the same baking soda solution that the team used in the field.

(Student)

Mixing the baking soda and the water with the soil is called defloculation. What it does is the baking soda causes the particles to separate which enables us to wash the clay off from the very small rocks, charcoal and other artifacts that are in it.

(Narration)

But this time, since even the most minute item might be a clue, the material goes through an additional step on being strained in a floatation tank.

(Student)

We pour in the feature soil that's been sitting with the baking soda. Once we've put the soil in the floatation tank we start the process. The water comes up through and turbulates the soil and causes any soil particles that are smaller than 1/8<sup>th</sup> inch to sink leaving only rocks and other material that might be in the soil. We generally stir it up a little bit. You can always bring up some soil and see how much it's cleaning up. Then the charcoal and water that flows out will go through this cheesecloth bag first and capture any burnt seeds or charcoal that might be in the soil. Some of the larger pieces need a little encouragement sometimes. If the soil sample is large then it could take all day. If it's a small sample just a couple liters then it might finish up in a half-hour or hour.

(Narration)

The larger material is washed, while the finer items are carefully picked through and separated.

(Narration)

From there they will be examined once again and cataloged.

(Narration)

The work in the laboratory is just as labor intensive and tedious as that in the field.

(Narration)

The life of the archeologist's work continues on in other ways.

Molds are sometimes made from the original artifacts to be passed around in schools and handled by the public.

(Narration)

In the end Cultural Management reports are written.

(Narration)

It is an obsessive field.

(Bob Bartone)

.. As archaeological techniques evolve and as more sites are discovered we learn more and more. It's like any kind of scientific pursuit – you might think you have the answers and then you get into it little bit and then answering one questions opens up a host of other questions and that's just the nature of archaeology and, and the nature of scientific pursuit in general.

(Narration)

It is a field pursued by driven people.

(Jim Petersen)

...Archaeology and other academics aren't necessarily big money makers. So we find typically in the field people who are involved because their passion, their concern, their interest in the human story. The human past. And it's these things that drive us oftentimes to work long and laborious hours. It's not a field to go into for people who

want a quick fix, a quick return. It's not like that oftentimes for every hour or two we work in the field we might spend ten or twelve hours working in the laboratory laboring over our finds, our discoveries, trying to make sense of them. So it's very time consumptive, very tedious. A field for people who have some attention to detail and some perseverance.

(Linda Greenlaw)

Archaeologists are dedicated to and passionate about the work. Like many scientific disciplines the answers to their questions lead to more questions. And that's what it's all about isn't it? Staying curious and investigating our world.