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Description: **4005 Brian Robinson,** interviewed by Adam Lee Cilli, November 15, 2013, in his his office in South Stevens Hall at the University of Maine, Orono. Robinson talks about the beginnings of his career in archaeology; conducting research in Alaska; his role in the Climate Change Institute; changes in the CCI over the years; the CCI's contributions to climate science; and the debate taking place outside the scientific community over climate change.

Text: 10 pp. transcript

Related Collections & Accessions

Restrictions

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Notes

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Narrator: Brian Robinson

Interviewer: Adam Lee Cilli

Transcriber: Adam Lee Cilli

Date of interview: February 6, 2014

ABSTRACT: This interview took place in Brian Robinson's office in South Stevens Hall at the University of Maine in Orono. In the first half of the interview, Robinson discussed how he became interested in archeology and described some of his early research projects in Alaska. Later, he reflected on his role in the Climate Change Institute and considered how it has changed over the years. Towards the end of the interview, he shared his views on what he believes is the Institute's greatest contribution to climate science, and he considered the climate change debate taking place outside the scientific community.

Note: This is the transcriber's best effort to convert audio to text, the audio is the primary material.

Cilli: This is an interview with Brian Robinson, professor of anthropology. Today is February 6, 2014, and this is Adam Cilli conducting the interview. I'm wondering if you can tell me what attracted you to anthropology.

Robinson: Oh, boy. I'm an archeologist, and I think I decided I was going to be one at the age of 16. So it took me a while to go through graduate school, but it was something I always wanted to do from quite a young age. I had worked on archeological sites at that time at my home in Manchester, New Hampshire, and kind of became hooked. So when I went to undergraduate school at the University of New Hampshire, I already knew what I wanted to do. And amazingly I've managed to stay in the business. [laughs]

Cilli: That seems remarkable to me that at such a young age you knew that you wanted to do archeology.

Robinson: I don't know if it's narrow minded or if it's insightful; one or the other. [laughs] From the first day in undergraduate school I went in to see the professor, [said] that's what I wanted to do. I worked for a long time for Cultural Resource Management (CRM) Archeology, before going to graduate school, so I stayed in the business but it took me a little while to decide that I had to get a PhD in order to go on with it. So I returned to graduate school in 1985 to Brown University, and got my PhD through them. And I worked most of my life in the northeast. When I came here, I came as a research associate, working on a grant-funded project on central Alaska. And I did that for three or four years here, and was part of the Climate Change Institute at that time (that was 1997) and then became a faculty member in 2004. So I've done a decade of work in Alaska and mostly research in the northeast. So I've always been northern, I've always been sub-arctic, all topics that were of interest to the Climate Change Institute.

Cilli: What year did you earn your PhD?

Robinson: I completed my PhD in 2001, while I was here. It was one of those times when I finished class work and went straight to work. It took me a number of years to finish it, but it was a large research project. I was redoing collections from the Morehead burial tradition, the so-called Red Paint People in Maine. So this was my area of study and I'm living in the middle of it, which is good. I finished that several years after I came here. At the same time I was doing the Alaskan research.

Cilli: Who contacted you from what was then the Quaternary Institute?

Robinson: My predecessor Dave Sanger, we were both northern archeologists, and we had probably known each other probably from about 1980.

Cilli: Did you meet each other at a conference or something?

Robinson: I think just by being colleagues. I was doing archeology and publishing in it long before I got my graduate degree. Yeah, certainly from conferences.

Cilli: And you had read each other's work.

Robinson: Yup, absolutely. My PhD dissertation, David Sanger was the outside reader for my committee, so we had worked rather closely for a long time, and I had worked for him here in 1989 doing contract archeology as well. Because of the nature of my Alaskan research, I was fairly flexible as to where I could be and my wife and I chose this as the place to be. And it ended up being very fortunate and again I got the northeastern archeologist position here after Dave Sanger retired. Adrian Burke had been here a couple years in that position and then moved to Montreal.

Cilli: And so Dave retired actually some time ago?

Robinson: Yeah, I can't tell you exactly when, but he went to a half time position, overlapped with us. And that was great, in any institution there's not too many of us that have the same specialization, so it's always wonderful to have colleagues you can commiserate with. He and I overlapped quite a few years, and his office is right across the hall from me. And we really had a lot in common, in terms of our research and background over the past 20 years, so it really worked very well.

Cilli: Can you discuss some of the research you were doing in Alaska?

Robinson: Yeah, I was working with Greg West, who was doing extensive excavations in central Alaska, in the Tangle Lakes region, not too far from Denali National Park. And he had a hundred and fifty sites and a lot of them were unusual number of late Pleistocene/early Holocene sites, so about 10,000 years old. I conducted research on those sites for a number of years, went to Alaska, and in fact I've just been asked to finish the book on the research as a whole. So at that time the basic identifiers of culture history were unanswered, and are still unanswered. But it has a lot to do with the seasonality, the movement of the people. You're in an arctic environment. You have a very extreme environment. How do you adapt to that? In my case, it seems one of the explanations is that they had radically different toolkits in the winter and in the summer, partly because in the winter, in some areas in Alaska, you're basically in the dark 24 hours a day, lithic sources are snow covered, so just getting access to materials to make your

hunting weapons with. So they had radically different technologies, and that made the archeological record kind of confusing, and we're still sorting that out. And that's been a great project for me, because a lot of the projects I've had have been really large data sets from many sites, so it allowed me to do landscape analysis and activity patterning over big areas, and again it's partly in this case, because I worked on a series of sites that were the life's work of another researcher and got to look at the technology and the spatial arrangement of the landscapes, so it's been really good.

Cilli: So, did you find that where previous archeologists thought there were two cultures, there really was only one, but that their seasonal toolkits were so radically different?

Robinson: That's exactly right. You picked up on that really quickly. They were almost two completely sets of tools, and normally we like to think that people have a culture that's fairly similar, and you could recognize them, based on their different tools, and in this case, the proposal that is still not accepted but is at least more popularly looked at in Alaska, with different seasonal toolkits they were both different tools and very tempting. So when you see different groups of tools in different areas and different material types, I think it's pretty logical to assume they were different people, and I think that's one thing that archeologists have been doing over the past few decades, realizing the diversity of human activities and conditions that people had to live in, literally in this case the stone that would take… if you're making stone spearheads, it takes a big piece of stone. And this idea would go on, this idea of sharply contrasting activities. It's just the last decade, almost the last five years in Alaska, that it's really picked up. Now everybody's asking more complicated questions about the archeological record. It's really good because everybody's testing different ideas, and that's what we need to do. So it was fun being a part of that and now I'm working up the research in the writing, as part of a whole.

Cilli: So your work in Alaska is still ongoing?

Robinson: It's still ongoing, yeah. Especially finishing the book on it. We had done quite a bit of it before I got my full time position here. But now it's picked up again, to try to get the work done.

Cilli: I'm wondering if you can now shift gears to your research here in Maine.

Robinson: Sure. That background, working with large collections, doing spatial analysis, working in northern climates, was what I was doing when I came here. And early on, while I was here, I started work on a Paleoindian site in the northeast (in Massachusetts). Again it was an old set of collections, and in this case the excavators of the Bullbrook site in Ipswich, Massachusetts, had claimed that they had a large camp circle with 40 houses basically in a village that was 12,000 years old. And when they claimed this 50 years ago, nobody believed them. Cause it didn't fit our anthropological models, literally. We thought at that time there must be small groups of people, highly mobile. Then about 20 years later we had some researchers start saying, "You know, that was possible." And by that time the site was already destroyed. So, I got to know these people, the excavators, and I worked with them (again while working with Fred West), and the fact was the more I got to know them, the more I realized they collected a lot of data. Because they thought they had this pattern, they collected data that a lot of archeologists weren't interested in. And it was kind of fascinating. They became so dedicated to the idea that this pattern couldn't be arbitrary, that this big circular pattern couldn't be real. I

worked with them for quite a number of years and said, "Boy, we can redo the mapping, even though the site's gone." So, now, with the help of photoshop and digital technology, we took their home movies and photographs and digitized them and replotted the whole site and got GIS coordinates on the original excavations. And we made a pretty strong case that we were correct. And it makes it the largest single organized settlement in the Western Hemisphere during the entirety of the Pleistocene. So it was really a spectacular site, and it led to me asking, "why were they there? Why were they in Massachusetts?" And again, with people working here at the Climate Change Institute working on sea level change and bottom bathymetries and things like that. My present hypothesis is that when you lower the sea level to what it would have been, twelve thousand years ago, which is when these people were living there, I was actually looking for some kind of ravine that might have helped direct caribou up off the coast. And there was no ravine; what there was was Jeffries Ledge, which is a fishing ledge. But it turns out it would have been an island. So when the sea level was 10 meters lower than today, there was an island out there that was a third the size of Cape Cod, just offshore. And the theory is that this island, during the cold period, still during the glacial period, would have been a good place for caribou. And in the winter caribou come off such islands and go into the woods, and that would put them right passed this site. So it would be very predictable that people could've gone down and looked at the island and saw how the caribou were. But they needed a lot of people to direct where they wanted to the caribou to go. So the suggestion is that it's a communal caribou hunting gathering. And it was on a piece of land that was not badly disturbed and then these amateur archeologists found it just before it was destroyed by these sand pit operations. I worked quite a number of years on that, because it was literally having to reconstruct the mapping. Figuring out where in the woods a photographer was standing when he took pictures, and we used triangulation methods, and methods that would have helped put the photographer in place, where he was standing for each photograph 60 years ago, which is pretty neat. And I wouldn't have been able to do it without the original excavators, especially Bill Eldridge, who really saved the site. He was as sharp as a pin, and I interviewed him for 15 years over time and learned something every single time I talked to him, right up to his 90th birthday. We had a party for him when he turned 90, and he just wanted to go back down to the basement and keep researching. So that was really a privilege. And it ended up being a very unusual site. So I worked on sea level rise here. The theory isn't proven yet, but it has a whole lot of elements that have to be just right. The timing has to be just right; the sea level has to be just right. Then eventually we could find freshwater samples on the submerged island and it could actually be proved, so we start out with these models that are somewhat speculative and they make something make sense, but we still have to prove it. And in his case there's so many variables have to work, that it makes a good case.

Cilli: I was just about to ask you about the ways climate science has informed your research, but I see that…

Robinson: Since I worked in the Arctic and northern climates and also with Pleistocene materials, everything is climate change, trying to figure out where people were in the landscape. Interesting story, as far as influence goes. I was here, at the 25th anniversary of the Climate Change Institute, and before that time we had Hal Borns and George Jacobson and Del Belnap, Joe Kelley, all these people working on paleoclimate and paleocurrents and marine change. And a lot of that work was done locally here in Maine. And then things branched out as time changed. And then in 1997 Paul Mayewski gave one of the first talks he had ever given at the

University of Maine, and I was there and I guess I had the privilege of not know what he had done before he talked, and sometimes it's enjoyable to discover something when someone presents it. Prior to the ice research, trying to get resolution in time in climate change was a lot like archeology. We had radiocarbon dating, and if you were lucky you could get plus or minus 50 years, and with extenuating circumstances do better than that. And then Paul gave the talk on the Greenland Ice cores, and he had resolutions down to a year, 100,000 years ago. And I'd just never seen anything like that. And that really introduced the topic of abrupt climate change. And that's a real challenge for archeology, because we still usually don't have that kind of resolution in time. We're getting better, but we still have to find the right piece of charcoal and do multiple dates, in order to get our errors down to something like 20 years. So that's been a real challenge and a whole change in point of view, in terms of the kinds of climate affects that affected people.

Cilli: Have you had many opportunities to do research with other members of the Institute?

Robinson: It's been mostly Alice Kelley, I've worked with Joe and Dan and Marty Yeats. Marty's in earth sciences. But one thing, as an archeologist, another thing that comes with the Climate Change Institute and the associated departments, is just a wonderful set of toys that most archeologists don't have an opportunity to work with. So, the scanning electron microscope, a microprobe, those kinds of things. There's a wealth of technical analyses in archeology that have not yet been done. We find faunal remains, animal teeth, microscopic remains, all of those things can be looked at more closely, can be looked at for either chemistry or isotopes, or seasonality of growth rings, all of which takes equipment and expertise and things like that. So I know, in many other anthropology departments, very good anthropology departments simply don't have access to that kind of equipment and expertise. So that's why the masters in the Climate Change Institute for archeology here is so very good for those people who are focusing and maybe want to go on for their PhD in climate-related studies in archeology.

Cilli: You mentioned that you and Dave Sanger had done research together. Can you talk a little bit about that?

Robinson: Yeah, Dave did a lot of work when he came here, on the shell middens. Shell middens are on the coast, places where people had dumped their refuse, and it included a lot of shell. And that shell makes the soil less acidic, and you get excellent bone preservation. In the shell midden we get the fish bones down to the size of anchovies, will be well-preserved. If you go two feet beyond the age of the shell midden, you get almost nothing. So in this little narrow strip along the coast, you have spectacular bone preservation, which allows you to look at animal bones, tool technologies, things that you don't see otherwise. And right at the moment, it's one of our great fears and problems is that we're losing all those sites, with projections in sea level rise. These things are on a fragile strip on the coast, and a big storm can take a site out. So they're predicting rising sea levels and big storms. Well, there's thousands of these sites from the last thousand to two thousand years, and we're projecting that the vast majority of those may be gone in fifty or a hundred years. Well, we're not doing nearly enough work now to even start to salvage those sites we're losing. When Dave was working in the 1980s, he got some grants, he did large-scale surveys of several entire bays, and had quite a large number of graduate students working on those in things that right now I couldn't replicate. He did these large scale surveys that people are gonna be mining those for generations, if in fact things go the way we think they are, we may lose the shell middens. Then these are going to become an archive. So

Dave did a lot of large scale survey that now allows me to focus really closely on individual sites. In other words my current work has been spending a number of years at a single site in order to better understand the activities that took place on it. And I guess in a way I feel a little bit better able to do that because all Dave's work is in the background of really important research on site distributions and things like that. So we've had that in common as well as a number of other things. Dave was one of the first people to write on microblades in the northwest coast, that my work in Alaska followed-up on as well.

Cilli: Since you've been involved with the Quaternary Institute and now the Climate Change Institute, how has it changed?

Robinson: One thing that's nice about what you're doing now is that the founders are mostly all still here. I work with Hal Borns quite a bit, because he's interested in paleo-Indian studies. He did the geology on some really major paleoIndian research in Nova Scotia, back in the 60s, so we have again all this common interest. And that's been really great. And I've published with George Jacobson, and in this case it was on salmon populations over time, and the problems of identifying them in the archeological record. And that was a long interest of his, because this is the southern end of their range, so changes in temperature and water temperature, could cause that range to shift. So, because of that, it bears on fisheries programs going on today.

Cilli: Can you walk me through your collaboration with George Jacobson? How did that come about?

Robinson: I came here as a research associate. I wasn't a faculty member. But being a research associate in the Climate Change Institute, includes you in everything that they do. So, I've given talks at what is now the Borns Symposium (used to be the Agassi Symposium), in which you present your research, and it's a pretty formidable group here, with a lot of different backgrounds. And I tell my students it's one of the most formidable groups they'll ever give a talk to. In this case, I gave my research on Alaska and then on Bull Brooke, and people like Hal and George and Dan Sandweiss and others were always very supportive. Going on fieldtrips, which used to be a kind of family affair, where the whole group would go out for several days and socialize and get to know each other and things like that. In a way I was not primarily climate oriented when I came here. I've been doing regional cultural history, and you get drawn into things that are new to you, and then that's when you find what an advantage it is. In a way I've been drawn a couple of different ways. Certainly climate change is a major influence. And now, as a northeast archeologist, I do Native American archeology, and another change in recent decades has been the degree to which the Native American communities involve themselves in archeological research. You would think that that would be, that Native Americans and archeologists would have a lot in common, but early on they were pretty separate. And now it's really part of my job to work with the Native communities and find out what their interests are. I now work with the Passamaquoddy's in their petroglyph sites, and I normally wouldn't have taken that on. Petroglyphs are hard to interpret. It's a very different feel, but when they acquired the land, they acquired the petroglyph sites, [and] wanted to do the archeology. So I got pulled towards the culture history of northeastern natives from the interests of the communities themselves. I also got pulled towards a greater variety of climate research than I would have done at the same time. And the two can fit together just fine. I talked about the ice cores. The ice cores were a great challenge, because they gave a resolution of climate change that… again I wouldn't have even fathomed had I not seen it presented. Well the challenge was how do we

bring this into archeology when we don't have the resolution of data? Well, you look in more detail and that's what I think some of the native tribal historic preservation officers were interested in as well. Looking in more detail at the cultures; [asking] how do they change more subtly? They both are looking into the data in more detail, but bringing in a greater complexity of the kinds of things that influence culture. So, I would say I was doing large scale landscape and sediment pattern research before I came here. But with the Climate Change Institute and working with the Native communities here in Maine, I actually got pulled into more detailed, more precise research, that you need in order to confront questions from both of those points of view. Would I have done that otherwise? I don't know.

Cilli: It sounds like that could be useful in giving an indication of which faculty do research that could be of use.

Robinson: Very much so, very much so. And I'll give you a couple points of view. When you start out with something, especially in my case. I hadn't even finished my PhD when I was here. I was quite frankly intimidated by the group of people. It's a pretty outstanding group, and you're nervous about those kinds of situations. But having done it for a number of years, and then especially now, after becoming faculty and watching the graduate students go through it, I think it's almost a critical aspect of what you need to go through. The students are usually really nervous their first year. And then it's fun to watch when they successfully go through the programs and then they've got their niche in life sufficiently under control, that you can really tell that their presentations have been integrated from all these points of view. And the challenge is to present to a very diverse audience who have lots of different reasons to question your research that you have not come up with. It's gotten more difficult. The place has grown. One of the things we just started last year was having the ice breaker. We all get together and, [and] I thought ten minute papers were short, [but] now we give two minute presentations. But in that two minutes the students can figure out who you are and whether they overlap with your research. So I thought it was a really good change. The papers have always been good, but there's a limit to how many you can have, and as the Institute grew they've had to adapt to what they could do. There's always been a problem with the Symposium on, when's a good time for everybody to take two days. And there's no good time. [laughs] So we end up doing it right towards the end, almost towards the finals period, and still not everybody can make it for the whole meeting. But I think it's really important for the students and the faculty.

Cilli: You can right around the name when Paul Mayewski came and they changed the name from the Quaternary Institute to the Climate Change Institute. What did you think about that?

Robinson: Oh, I'm kind of basically a stick in the mud. But their reasoning was absolutely correct I think. Quaternary didn't have a lot of name recognition. And I must admit simple things like being able to be found in a web search is now really important. So, I think on the whole it was fine. Right from the beginning anthropology has always been included in Quaternary studies, because there's always been an interest to how did people react to all these different changes. So, anthropology was a good fit with that, and is especially so now. Now that rapid climate change is upon us, it's now almost more commonly recognized. I think in the past, maybe as anthropologists we felt that we were making the case that culture was different than the hard sciences and you had to consider how different groups would react. Now it's almost become common knowledge. It's so obvious that different groups here in the United States react differently, almost violently differently, to the concept of whether climate change exists or not.

So I think that it's almost taken for granted that when we continue to go into this period of climate change, that cultures around the world with different opportunities, coming from different places, are going to react differently. So it's almost like we don't get to lecture that anymore. [laughs] Everybody knows it.

Cilli: Speaking of climate change, it seems to be the case that outside the scientific realm the human role in climate change is still being hotly debated, and I'm wondering if you can comment as to why that might be the case.

Robinson: I think that's part and parcel to anthropology and humans. We're parts of different groups and it's kind of remarkable the degree to which we construct our worlds and then at the same time the degree to which we can ignore other worlds. And I think the combination of politics and religion and culture change. I grew up during the Vietnam War during a time when things were tumultuous in terms of what directions we should take, based on free enterprise or moral decisions or all those kind of things. And it hasn't gone downhill since then; it's just changed a lot. So you've got a lot of controversy going on, and at this time I think in a way the challenge of climate change is so great that for some groups, I think in a way it's easier not to believe that it happens, but I think it's also kind of a challenge for some groups… questioning the science becomes almost the logical approach for them. So I think that's part of the story, of how different subcultures react and are likely to react to threats in the future. And the fact that we can react so differently now means that having to take into consideration all our different points of view is just as important now as it ever was. And I think to a degree the movie *The Day After Tomorrow*, had a big impact on the public, because the public is reading about climate change much. But you put it into a movie and it reaches a different segment of the population. Well, that comes and it goes and people change, and climate change as a concern is such a long term thing and we are used to thinking in short term goals, so I think it's easy to get excited about it and to let it wane and then to get excited about it. But it's interesting that the climate folks always like to distinguish between weather and climate, but when things start changing, when rates of weather change they overlap. And we look at what's going on this winter to see if we can makes sense out of it, in terms of climate change. And I think people are doing that more and more, and as some would suggest we are already in the midst of climate change now. So, in the Climate Change Institute, I'm an easy believer. Of course, we don't all have the advantage of the exposure to the science on a daily basis, like we do have here. There are very different belief systems, not just about the climate but economics and things like that.

Cilli: What role should the Climate Change Institute play in getting out there and educating the public?

Robinson: In much of my career, I guess I've been a little bit behind the scene. I like the research. I really do, and we put a lot of effort into documenting, making sure that when we put forth theories or whatever, that the evidence is there, that somebody else can go through it and check it, and that's very different from going forth to the public. More and more in the Climate Change Institute now is a great consciousness in having to put these things before public, and a lot of discussion… one of my graduate students, Sky Heller, is in the IGERT program on abrupt climate change and culture. And it's a major part of the discussion, not just the science and climate change, but how people can react. Some people hope that we can slow climate change down, others say we've got to prepare for the inevitable. But I think it's really part of the program now, that it's a very serious… the different ways that people react is very serious and

very important. And we can't impose things on other countries. But need to at least do our best to make it clear what's likely gonna happen. The discussions in the IGERT conferences about whole nations that aren't very far above sea level, and some of them now buying land on the mainland. But is it a country then, or is it not? So I think maybe you need both people who are very good at putting that forth, and people who are very good at doing the science…. The controversies that you talk about are part of what makes you wonder whether you're doing as well as you could. What else could be done to make it a proposition that we need to seriously consider. It's changed a lot in just the last few years. But it keeps on fluctuating, in terms of whether it's on people's minds or not.

Cilli: What do you think has been the Institute's greatest contribution to our understanding of climate?

Robinson: I guess I would go from climate change itself to rapid climate change. In archeology, I do a lot of reading on early archeology, and in the 1930s, before they had radiocarbon dating, people did their darnedest to figure out how old things were. Well, in a way that got mastered fifty years ago, but the way that climate changed and now with concepts of rapid climate change, it just makes it so much more inevitable that climate has a strong impact. The definition of abrupt climate change is when you can start to see that change from year to year. Or maybe the major change is experienced within a decade, so that within a lifetime people have had to adapt to very new conditions. I think before we had this idea of gradualness…. Now, with Paul Mayewski's recent talks, where their starting to see individual storms ten thousand years ago, then you're starting to see the beginning at the Younger Dryas period… It's just brought it home how important those kinds of instances were in the daily life of people. And of course now, rapid climate change in the present is not a very new concept. Just within the last couple of decades, with the ice coring, that we had the tools to look at that. And boy what a good thing we know about it. Because it's not just worrying about, or assuming that these things will be gradual, but that there's tipping points, there's points of no return, that we could go into a glacial period very rapidly if the ocean currents change. People experienced those things in the past and probably had fairly radical reactions to them. And now we can at least try to think of what those reactions might have been. And I'll give you an example. The period I worked on, the Paleoindian period in Massachusetts, they made a projectile point commonly called a Clovis Point. So, there's a strange thing about Clovis points. They occur all across the continent. It used to be thought that they were the first people here. But now it's thought that that might not have been the case; there might have been other people here before. I can't think of another technology that covers the whole continent for a specific point in time. One of the thoughts that it may have been when the Younger Dryas commenced again, that the sudden change in resources inspired people to look for solutions, and changed belief systems about what to do in order to hunt for animals. So these kinds of explanations are something that we really didn't have in archeology before, because we didn't know it could happen.

Cilli: Well, that's all the questions I have, but before we conclude the interview I do want to give you a change to add something I didn't think to ask you about.

Robinson: Well, I think, again, my current research includes all my past research, in different stages. But I think for the foreseeable future for me, climate change has an immediate impact. It's not speculative. I'm a northeastern archeologist and we're going to lose a major part of the archeological record. That's a major part of the heritage of the Native people of Maine, and

when that's gone we're gonna be severely restricted, beyond what we can do now. Our discipline depends on very little bits and pieces of evidence, so when we lose whole categories of that it's a permanent loss. So I think right now in the state of Maine, oftentimes these shell middens fall through the cracks. They're covered in a way by easements and conservation laws, but as a result they don't get excavated because of those disturbances. The amount of work is pretty small. I do a field school that's funded with a MAPPY grant through the university where we work with Native groups and work on shell middens. And that project was meant to initiate a bigger project, and I hope that's still what it's going to do, 'cause we need to do more. It was interesting, I've seen lately native communities have taken on a leadership role in a lot of environmental movements, especially in Canada. So, the more people that you have integrated into these kinds of concerns, the more likely you'll see a shift in attitudes, and establishing priorities. So, I guess for me in a way, in addition to climate change, the interpretation of climate change, it just so happens that my discipline is sort of like the melting ice caps. The ice core people feel it's an emergency, because they're losing their record, and they are. And that's how we feel in archeology.

Cilli: Well, thank you, Brian, for participating in this interview and sharing some of those wonderful stories.

Robinson: Thank you.