Ask an Archaeologist!

Q&A with Dr. Loa Traxler, Professor of Anthropology and Museum Studies Director at UNM

1. What is archaeology?

We can define archaeology as the study of remains from people of the past, their activities and material goods, as well as the patterns these remains reveal to us about their daily lives and society.

2. How did you become interested in archaeology?

I was always curious as a child growing up in central Indiana about the remains of long ago native people who lived in the temperate forests and along streams in the area of my home. We had a small box of artifacts that turned up occasionally in the plowed fields of our family farm, including arrow points, other chipped stone and a couple ground stone axe heads. They were all rather mysterious and begged to be explained, along with questions of where native people went who had once lived in this same landscape.

3. How did you decide you wanted to specialize in Maya archaeology?

When I began my studies in college, I was fascinated by traditions of indigenous people throughout the Americas, and the questions that still hung in my mind about their histories. After I completed my college degree, I had a chance to travel to southern Mexico with a college group led by a former professor to explore the art and architecture of Pre-Columbian Mexico. That trip inspired my interest in learning to do archaeology and to better understand Maya civilization and the Maya of today.

4. What does it take to be an archaeologist?

To be an archaeologist, it takes great curiosity, an interest in working with and sometimes solving puzzles, and a tremendous amount of patience!

Archaeology is really about the desire to understand something that seems elusive, or is not laid out in plain sight. And once you gain a better understanding from research of a particular set of questions or about an aspect of cultural heritage, archaeology also requires a desire to share that understanding with others.

5. What other disciplines do you need to be familiar with to be an archaeologist? Astronomy, geology, zoology, etc?

All of these disciplines are useful and contribute to archaeology, as well as many more! While no one person can specialize in all disciplines, it really helps to have an interest and willingness to learn about different subjects in the sciences, humanities and social sciences that bridge those first two. We draw ideas and techniques of research from many disciplines, and in fact, our work is more and more interdisciplinary as time goes on. In North America, archaeology is often part of the study we call Anthropology, which is all about the history of humanity across time and around the globe.

6. How do you find a site to excavate?

Archaeologists can work at many, many kinds of sites – those above ground and visible to us walking across the landscape, those below water, those below layers and layers of geological strata, and also those only recognizable from above in the sky. The questions that we are interested to know more about really drive what kind of sites are going to help us answer those questions. Even in an area where we know very little about its history or its people, the research questions we bring to the area help decide which sites may be important to lay down a basic story about an area or a period of time.

We are surrounded by archaeological sites – here in New Mexico, for sure, and really everywhere, since our long ago ancestors and modern human beings have lived on all the earth's continents. And we humans have left all sorts of evidence of our lives and our impact on the planet. So archaeologists look at landscapes through satellite images, we look at maps from all time periods, and we look for other clues of subtle or not so subtle influence that human groups have had on the landscape. And from that assessment of an area we work on identifying sites where we may find answers to some of our research questions.

7. Who is part of your crew?

An archaeological crew is largely determined by what questions and work we are interested to do… Sometimes a crew is made up of a team leader and helpers walking the landscape to see what lies on the ground; sometimes a crew is based in a research laboratory with computer screens and technical instruments working on the bits or samples of artifacts being studied.

It takes trained and experienced specialists to design and guide archaeological research, even with team members of all ages and many talents or specific skills who are part of the effort. Also critical in our teams are members who come from the areas that are the focus of the

research. As I mentioned, no one person can provide all the needed expertise, and no research question is really simple – it takes a team of archaeologists with different perspectives and life experiences really to think holistically about the work and the questions we pursue… and also to make sense of the data we gather!

8. Why does an archaeologist need permission to work on a dig?

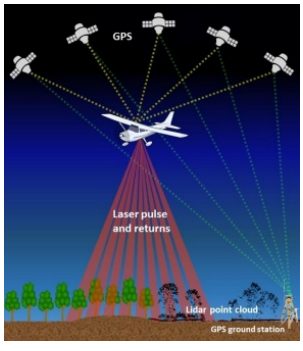
Much of the work that archaeologists do will alter the landscape, the site or the setting (context) of the materials that we study -- in many ways, archaeology is a destructive science (not always, but often). For this reason, we often only get a single chance to work with the archaeological record at a site and to gather its specific data, so we try to be as thoughtful and as prepared as we can be when we start the research.

Bringing someone new to the research team takes a commitment to work with them to learn what archaeology involves and how to document the work as it is being carried out. Sometimes the research is done in very sensitive or hazardous locations; sometimes the work is done with the collaboration of other countries and sovereign nations. For all these reasons, an archaeological team needs to be made up of those individuals with a purpose in being there and a contribution to make. Even for research teams that fold in volunteers, there is an expectation that everyone has a clear role to play and responsibilities that they can carry.

Not only does archaeology require assembling a solid team, we also have to seek permission from whomever the archaeological site and resources belong to. That could be all of us as U.S. citizens for sites on our public lands (for which we ask permission from federal, state, and municipal governments), that could be a tribal nation wanting to carry out archaeological work within their lands, and it could be a foreign government where teams seek to work on sites in far flung countries.

9. What tools do you use in the field and in the lab?

Archaeologists use almost every tool imaginable! -- from string, brushes and shovels to airborne LIDAR scanners, nuclear reactors, and huge computer banks to process data. The particular tools we use are influenced by the questions we are trying to answer, and sometimes by what our research budget can support! The tools that we use and the spaces where analyses can be done range from the simplest 1-meter square test pit with a simple mesh screen to the most elaborate high-security clean laboratory designed to sequence ancient human DNA and other compounds.



10. When you find an artifact, how do you decide what it is or how it was used?

Sometimes determining what an artifact is or how it was used is easy to establish based on its form or visible characteristics, and other times it involves a long multi-step process of detailed analysis to determine what it once was or what it was made from. We like to compare recovered artifacts to materials that we know were once used in particular ways, established through eye witness accounts or documented activities (such as in ethnographic observation). We also research materials at great length which are described in use for specific purposes (such as in historical accounts or in photos or drawings accompanying historical documents). Sometimes it takes a great deal of sleuthing, through analysis of the material and microscopic clues about its use, before we can say with any confidence what something was or how people used it.

11. What's the difference between a fossil and an artifact?

A fossil is a preserved, once-living being -- sometimes these are plants or animals or long ago ancestors, and these remains are preserved through mineralization in the stratigraphic context where they were deposited. Fossils are not, generally speaking, human-modified materials-artifacts. Archaeologists also recover other natural unmodified materials, which have been collected or associated with human sites. These we call ecofacts, and we look carefully at them for what they tell us about the environment and resources available to long ago inhabitants of a site.

12. What can you learn about the organization of a past society by studying the artifacts left behind?

We use artifacts to analyze, interpret and to look for patterns of behavior left from people long ago. When we can build up a greater and greater number of examples of these artifacts and their patterns, we can begin to appreciate how these materials reveal what groups of people did as a collective, beyond the evidence that we associate with an individual or a family group or even a small agricultural hamlet.

In larger groups, the interactions, successes and struggles of communities revealed in these artifact patterns tell us a great deal about the society (their sense of identity, belonging, normal behaviors, and relative level of wealth and influence that members of the group had). All these varied aspects of living in larger groups, conforming or not to group expectations, and navigating the social environment of their immediate community and beyond are what we think of when we try to understand the society of the people represented by these artifacts and their patterns.

13. Have you found any evidence that shows traditions practiced today were practiced long ago?

Throughout the Americas, archaeologists have a great deal of evidence for continuities in various practices and technologies used in daily life. From weaving and spinning tools, cooking and storage vessels, hunting implements and building traditions, many approaches to traditional lifeways continue from prehistoric times. In the Maya area, traditional Maya people in the highlands and in the lowlands of the Yucatan peninsula build their homes of traditional wood and thatch in a design recognized from Pre-Columbian times. Many women continue to carry water from nearby sources to their homes in vessels that are identical in shape to pottery fragments recovered from excavations… sometimes the modern vessels are made from brightly colored plastic, but the size, form, and use remain the same.

We also know that for the highland Maya people of Mexico and Guatemala, some traditions of tracking time continue from the pre-Columbian era to today. Contemporary ritual practitioners – or Daykeepers – are responsible for keeping track and using a 260 day ritual calendar to inform their work with their clients. This calendar is known to have existed and been used in Mesoamerica from before the Common Era, and was fundamental to the cycles of time that the ancient Maya recorded in the Classic period monuments and painted books.

14. Why is pottery important to an archaeologist?

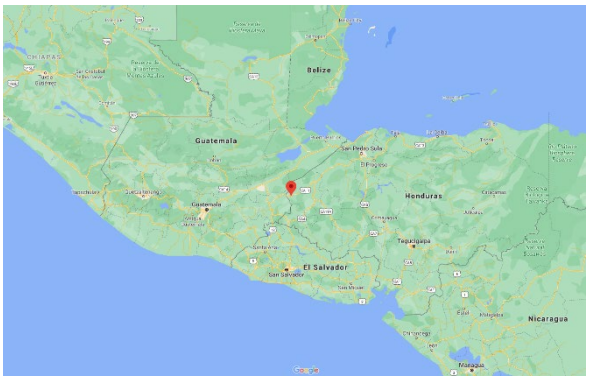
Pottery is one of the categories of artifacts that we find which tell us a great deal about its manufacture, its use, and its movement among those that once used it. Archaeologists devote a great amount of time to pottery for some very good reasons; 1) it is pretty durable material, and it generally survives well in sites where many other organic materials of daily and ceremonial life do not, 2) it is a material that lends itself to analysis for a great amount of technological and decorative information that reflects individual expression or shared traditions of a craft group, and 3) the location where we recover pottery shards or whole vessels may only be the last location where it was traded to or used. Archaeologists have the ability to analyze the ceramic material of pottery artifacts to determine where the raw materials came from for the artifacts' creation, and sometimes we can trace the route the pottery traveled to its final archaeological location.

15. Have you ever found any Maya hieroglyphs in your work? What did they tell?

I have found Maya hieroglyphs in my field research, and the most exciting example for me were recovering pottery vessels decorated with painted hieroglyphs placed in a royal burial chamber

at the site of Copan in western Honduras. These two drinking cups were decorated with painted hieroglyphs that we still are not able to decipher… The glyphs may make reference to place names near the Copan River Valley where the site is found, but the glyphs do not seem to form a text that we can understand yet.

16. What's the most exciting thing you ever excavated?



My work at Copan has included excavations in two royal burial chambers as part of the research carried out with the Honduran government and a project sponsored years ago by the University of Pennsylvania Museum in Philadelphia. The intense nature of working in these unique settings is unforgettable, and my colleagues and I are still analyzing the tremendous amount of information that came from those investigations. One chamber beneath the Copan Acropolis likely held the remains of the site's first Classic period king, whose ancient name was K'inich Yax K'uk' Mo' (meaning Resplendent First Quetzal Macaw), and the second chamber that I worked in for many seasons likely held the remains of the eighth king who followed in the dynasty after the first.

17. When you're not in the field or in the lab, what do you do?

When I am not in the field and not pouring over the data from our field research, I like to immerse myself in the stories and heritage traditions of other regions in the Americas. My college degree was in Fine Arts, and I love to read and absorb the information on the prehistory, historical periods, and artistic heritage from throughout the lands in the western hemisphere.

I also work with my students in both Museum Studies and Anthropology to share with them the interest in what archaeology can tell us about the past and how we can be better and better stewards of the collections and materials that archaeologists uncover.

18. What do you enjoy most about your research?

As with any scientific research, what I enjoy most is a satisfying understanding of a research question and the ability to share that information and sense of understanding with the wider public and our many communities. When I feel like I finally understand how to solve a puzzle or answer a research question that is a good day in the field or in the office!

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