



### Big Bone Lick Answer Sheet

#### Human-Animal Interactions

A) At the end of the Pleistocene (about 12,000 years ago), the area was very different. People hunted woolly mammoth, mastodon, giant ground sloth, elk, giant beaver, horse, musk ox and giant bison. Following the animals migration paths, or living in an area that animals frequented year round was key to survival. The people had to have a healthy respect and fear for these animals, since they were huge and could easily kill a human. More recently, people hunted bison that were attracted by the salt found at Big Bone Lick. These animals were still abundant in the region just 300 years ago! The region still attracts a diversity of animals that Native Americans hunted. These include deer, turkey and fish.

Take a look at the creek and imagine a group of bison drinking its water. People would use the high banks to ambush bison and other animals while they drank, surrounding them and throwing down spears and arrows. These animals were much bigger and more dangerous than anything found in the area today. It would have taken a group of people to kill and butcher these animals. There were no houses for shelter or cars for transportation. People would have followed these animals on foot and killed them with tools they had made by hand. We know how people killed and processed animals because bones and stone tools preserve very well. Tools and remains of butchered animals in the creek bed were covered with sediment. Now, hundreds to thousands of years later, scientists are unearthing them to try and understand how people lived.

Today, we have an abundance of food to choose from and typically eat what tastes good. In the past, people had to find foods that gave them a lot of energy as they were much more active than we are now. A mastodon, musk ox, or giant bison would have provided plenty of energy for a small group of people. Since there were no refrigerators, any meat not used had to be dried or stored underground or in lakes for later retrieval (often several months later)! People ate plants, too, but there is very little evidence of which plants they preferred or how they were collected and processed.

#### Salt Springs

A) As the water seeps up from below it brings with it sulfur, which gives the springs at Big Bone Lick their distinctive smell. Big Bone Lick is one of the largest and most reliable salt springs/licks in Eastern North America. This is attributed to the unique geology of this portion of the Midwestern United States, where sedimentary strata (layers of sediments deposited over time) were deposited on the floor of a shallow sea during the Ordovician Period (490-443 Million years ago). Trapped

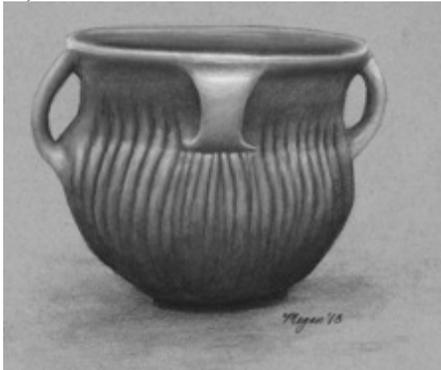
within these strata, salty seawater is forced up through fractures in the bedrock and is collected in surface depressions. These are what make the springs at Big Bone Lick. For thousands of years, Big Bone Lick salt springs have attracted a diversity of animals including bison, mammoth, and mastodon, as well as the people who hunted and scavenged these animals. Salt is necessary for all animals, people included, and Big Bone Lick continues to produce salt springs that still attract animals today. You might see deer, raccoon, possum, chipmunk or people tracks around the salt lick area.

Who were the Native Americans?

A) Woodland hunters and gatherers settled down for many reasons, but two major reasons were advancements in farming techniques, as well as pottery technology. When farming techniques became popular, people were able to produce enough food, including corn, squash and beans, to feed larger settlements of people. Farming allowed them to live in more permanent houses instead of roaming the land as nomads. With pottery, vessels were improved for food storage. This helped people keep their food safe from scavenging animals and let them store food so they could survive through the winter. One of the main reasons the Woodland and Fort Ancient hunters chose to settle at Big Bone Lick was because of the salt springs. Animals are regularly attracted to the salt springs; which means that the Woodland and Fort Ancient people would have had plenty of game to hunt.

Human History

A)



This is a Madisonville phase pot used by the Fort Ancient peoples who lived near Cincinnati. The Fort Ancient Culture has been in the area for about 1000 CE up to the first contact with Europeans. All types of Native Americans used pottery, once it was invented in the Americas, and they made all kinds of unique designs. Pottery was used for storing things like food or water and they used them quite like how we use our pottery today.



This is a Clovis point that looks much like what the Native Americans of over 12,000 years ago were using to hunt big animals like the Mammoth, Bison, and Mastodon. As the animals got smaller over time, so did the points. There are many different types of projectile points to be found because each Native American culture made different looking points.



This is a hearth that Native Americans used to cook food like how our ovens cook food. It is similar to a fire pit for camping, but they used this method for most of their home cooking. Most hearths have a rock floor that was created and they would cook over it.

#### Climate and Climate Change

A) Well, did you know that we are actually still in an ice age today? We have actually been in an ice age for a little over 2 million years now! So why isn't it cold all year long if we are in an ice age? It is because two main climate patterns exist in an ice age: a warm period (interglacial) and a cool period (glacial). Can you guess which one we are in now? If you said an interglacial (warm period) then you were correct! All that is needed to make it an ice age is for there to be ice sheets, which we have at the North and South Pole. During the last glacial period, the ice sheets were much, much bigger (stretching all the way into Ohio!) and it was cold almost all year long. Because of this, Big Bone Lick used to look like a boreal forest (a forest with evergreens like pine and spruce trees). This kind of forest is currently found in Canada and Alaska. Today when you look around, you will see a deciduous forest, which is filled with trees like maple, beech, and poplar that go through seasonal leaf growth and loss.

#### Research and Preservation

A) If you find something that looks interesting, do not pick it up. Important information is lost when an object is moved. Instead, tell the staff at the visitors center about your find and show them where it is. Would you like to learn more about the research that goes on at Big Bone Lick and other state parks? Check out these websites:

Big Bone Lick State Historic Site: <http://parks.ky.gov/parks/historicsites/big-bone-lick/history.aspx>

The Kentucky Archaeological Society: <http://heritage.ky.gov/kas/>

The Ohio Archaeological Society: <http://ohioarchaeology.org/joomla/>



*This questionnaire was created by Drs. Brooke Crowley, Linda Plevyak, and University of Cincinnati students during the summer of 2013.*