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A Context for the Vero Beach engraved mammoth

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In 1864 the paleontologist Édouard Lartet found a piece of mammoth ivory engraved with the image of a mammoth at La Madeleine Shelter in France (Fig. 1). The first clearly figurative mobiliary art had been found much earlier in 1840, also in France. It was a schematic engraving of a horse's head on a reindeer antler. Then in 1852 at Chaffaud Cave, two engraved hinds were discovered on a reindeer foot bone. This last image was so sophisticated that it was not originally thought to be from the Pleistocene. There was no concept at that time of art being made by Stone Age people. It was classified as Celtic. Since the discovery of the La Madeleine mammoth the search for a prehistoric artifact with the image of a mammoth has served as a holy grail for archeologists and fossil hunters. Before radiocarbon dating techniques were available beginning in 1949 the image of an extinct mammoth made by an ancient artist seemed to unequivocally verify the antiquity of that image and of the artist who made it.

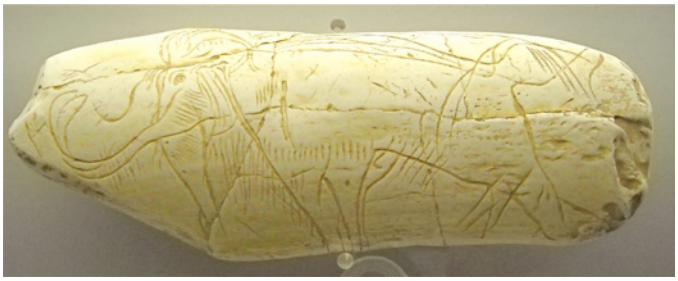

Fig. 1. La Madeleine. (Photograph by B. Alpert of cast in the collection of the Maxwell Museum of Anthropology, Albuquerque, New Mexico).

A variety of groups in North America were eager to prove that humans inhabited this continent before mammoths and mastodons became extinct around 10,000 to 13,000 years ago. Bones of these animals with Clovis points imbedded in them were not found until the 1930s.

In the late 19th century a flurry of mammoth images were purportedly unearthed. The first major find in North America was made in 1872, eight years after the La Madeleine mammoth had been found in France. Peter Mare, an Iowa farmer, discovered a carved sandstone pipe as he was working his fields. Although not found in an Indian Mound it was assumed that it was from the Mound culture because evidence of that vanished culture was so prevalent in the area. Mound Indian pipes are often carved in the likeness of animals. This one was in the shape of a mastodon. The pipe was shown to an amateur archeologist, Reverend Gass. Later, while it was

being examined, it broke. Test procedures in those days were very harsh and many artifacts did not survive the process.

Seven years later a second similar pipe was discovered on the same farmland by Gass and his friend Reverend Blumer. Both examples were placed in the Davenport Academy of Science in Iowa. Serious scholars of the Mound culture do not credit the authenticity of these artifacts. Some informants believed it was a hoax played on Reverend Gass by members of the local science academy (McKusick 1991).

Coincidentally in the same year, 1872, an engraved stone was found on a Pennsylvania farm by Barnard Hansell while he was cultivating his fields. It was a broken piece of slate depicting a mammoth or mastodon. Hansell sold it to Henry Paxon who miraculously found the other half of the piece in the same field nine years later and was able to fit the two pieces together. The piece was a gorget with two holes enabling it to be hung about the neck (Mercer 1885). Since the Lenni-Lenape Indians were the tribe indigenous to that area the piece is known as the Lenape stone.

There are a number of reasons to doubt its authenticity and these objections were raised almost from the time the gorget was found. The weapon depicted as used against the proboscidean is a bow and arrow, but archeologists are convinced that the bow and arrow was not known in that region until much later. My own impression is that the stone is suspiciously overloaded with iconic items that were considered to be Indian-like. The well respected paleontologist George Gaylord Simpson dismissed it as a hoax in 1942 (Mayor 2005:96,332-4). It is generally considered by archeologists to be a forgery. However, someone took the trouble to make a copy of it and claimed that this new example had been found in 1922 in the vicinity of Taunton, Massachusetts. That particular artifact has the distinction of being a forgery based on a forgery.

The most tantalizing discovery is known as the Holly Oak mammoth. It is an engraving on a whelk shell which has holes drilled in it to form a gorget. The discovery was made known in 1889 by Hilborne T. Cresson. He claimed to have actually discovered it twenty- five years earlier in 1864 at a site in Delaware. That date was significant because, if true, this discovery would have preceded Lartet's discovery of the famous mammoth of la Madeleine (Cresson 1890). The Holly Oak mammoth was much publicized and evoked enormous interest. It was later found that Cresson had been studying art in France at the time of Lartet's discovery and very likely saw the piece when it was displayed with much fanfare in Paris. Cresson studied art and then archeology. He was working as a field assistant at the Peabody Museum at Harvard when he announced his find of the Holly Oak piece.

In 1890, the year following his revelation of the discovery, Cresson wrote a book, *Early Man in the Delaware Valley* (Cresson 1890). It later came to light that he had been dismissed from an archeological dig in Delaware because he was suspected of stealing artifacts. The shell on which the Holly Oak mammoth was engraved was like ones in the Delaware area and it was probable that this ancient shell had been stolen from that site. Cresson himself was a strange, unstable personality. He chose an unusual anonymity by taking his wife's family name when he was married and there is no record of his birth date even on his tombstone. He committed suicide in 1894.

Although there were many doubters of this piece there remained some people who believed it to be authentic. Archeologist David Meltzer believes it is a copy of the mammoth from La Madeleine based on an illustration in the book *Early Man in*

Europe by archeologist Charles Rau (1878) (Griffin *et al.* 1988). The Holly Oak artifact is generally considered a forgery. It is in very bad condition as a result of damage from early testing techniques and what remains, the shell, so to speak, of its former self, is now in the Smithsonian Museum in Washington D.C. In 1988 scientists from the Smithsonian did radiocarbon testing of the shell itself and dated it to 1530 ± 110 years (*ibid.*). Some few people continue to believe it may be authentic because they claim that radiocarbon dating is not conclusive for shell material but most authorities agree that it is a fraud.

In 1921 J.L.B. Taylor and Vance Randolph found a bone in Jacob's Cavern in Missouri on which they discerned the image of a mammoth. They wrote that it began disintegrating even as they removed it from the cave (Allison 1926). The bone was studied by archeologists at the American Museum of Natural History in New York and remained in the museum's collection. When I went there to see the piece it could not be located. The materials expert at the Museum told me, "Something went awry," which is a euphemistic way of saying that it had been destroyed during testing. In terms of the imagery from photographs made shortly after it was found, the engraving was unlike anything Paleolithic in Europe or America. It is highly schematic (more like a hieroglyph). It is so schematic in fact that some archeologists refer to it as a rhinoceros (Messmacher 1981: 84).

There are a number of proboscidean images in parietal rock art in the United States, most of them in Utah and surrounding states. There have been a variety of explanations for them: **1.** A hidden herd of mastodons in the isolated passes of the Utah mountains was able to survive longer that elsewhere. Given as a precedent are the mammoths on Wrangel Island who survived much longer than those on the mainland and were still alive 7,000 to 4,000 years ago. **2.** A branch of the Barnum and Bailey circus came through that area at the beginning of the 20th century with a much publicized elephant named Jumbo. **3.** The image is not a proboscidean at all but is actually a bear with a wriggling fish in its mouth. **4.** Someone altered a bear image to make it into an elephant (referring to the Moab glyph). There are other bear images nearby and the feet of this petroglyph seem to be those of a bear. They are certainly not elephant-like.

Perhaps it is significant that there are so many proboscidean images in that area. Salt Lake City in Utah is the Vatican of the Mormon Religion. The presence of elephants and possibly other proboscideans is an article of faith with Latter Day Saints (as believers are called) because these animals are mentioned in the Book of Mormon as having been in the Americas after the prophet Lehi led his followers, the *Jaredites*, to the New World 800 years ago. Elephants are mentioned along with "cureloms" and "cumons." These two strange sounding animals are believed by some to be another name for mammoths and mastodons.

Then there is a whole literature of finding proboscidean imagery in Mexico and South America. Mormons believe that the massive constructions in that part of the world built without the technology of the wheel would have required some beasts of burden. Although their origin was in the New World, horses had become extinct there along with many other large mammals. The only horses that remained were the progeny of those that crossed over into Asia. Therefore mammoths or mastodons were imagined to have filled that role.

Mormonism is in many ways a fundamentalist religion. The official belief is that it has been only a few thousand years since the Great Flood in which many animals

were saved but the dinosaurs and other now extinct animals were drowned and then covered with silt. There are a number of other fundamentalist groups in North America who are believers in “Creationism” (Numbers 1992). Fundamentalists accept the chronology worked out in 1650 by James Ussher, Archbishop of Armagh and Primate of All Ireland. They date Adam and Eve and the Garden of Eden to 4004 BC, or about 6,000 years ago. They place the Great Biblical Flood at about 4,000 years ago.

With this view of archeology afoot, simmering under the surface of reason like a powerful virus, and with a history of invented and dubious ancestral hoaxes in North America, one has reason to be deeply skeptical of the appearance of the new Florida discovery—an artifact engraved with the image that everyone has been seeking.

The fossilized bone found by James Kennedy carries the baggage of these forgeries but there are some large differences (Fig. 2). The piece was found in a known fossil-rich site called The Vero Beach Early Man Site. The site is named for the presumed Pleistocene human bones that were found there. Mammoth bones, ancient crocodile bones and other fossils were found and continue to be found. The artifact has been subject to sophisticated tests not available for the earlier finds (Purdy *et al*. 2010). James Kennedy himself is unlike any of the known forgers and has an aura of integrity, even naiveté, that the hoaxers did not possess.

Fig. 2. Vero Beach mammoth (image 1 ½”). (Photograph by Jeff Gage, Florida Museum of Natural History, Gainsville, Florida).

We can also examine this image in the context of known Pleistocene images of mammoths that have been found in Europe and Asia. These images are unequivocally mammoths because there were no mastodons in that part of the world. Very ancient and very skillful sculpted statuettes of mammoths have been unearthed,

but I will not discuss these because I want to focus on the demands of drawing and engraving.

What is most amazing to the modern viewer about the Pleistocene artists is their skill in depicting the Ice Age animals that were largely their subject matter. These artists evidently wanted to replicate, as exactly as possible, the creatures that appeared before their eyes. This ability to achieve graphic mimesis had evolved at some point in the *Homo sapiens*' past. The San people in South Africa have produced art that I believe is the closest anywhere to that of Pleistocene Eurasia. Both art-making societies were concerned with translating marks into an approximation of the input from our system of visual perception. The San artists succeeded in portraying animals, in particular, with remarkable realism in a manner very similar to that accomplished by Franco-Cantabrian artists. If the San and the Franco-Cantabrians both had this ability, that fact strongly suggests that it was inherited from a single source present in the ancestral human population. According to mitochondrial DNA tests the San are descended from the most ancient branch of the human tree. So this graphic gift was likely inherited from an even earlier common ancestor in the same way that the ability to use language most probably was inherited (Wade 2006: 43-63). It must have already existed as a genetic possibility in some of the ancestral humans who lived in Africa before the small troupe of wanderers, now known as *Homo sapiens*, made their journey out of Africa (Templeton 2002: 45-51). Not every descendent society has had the ability or the desire to replicate visual sensation. But every society, to my knowledge, has had the ability and desire to use marks symbolically.

Mimesis, or the attempt to capture the look of something, must have held an extraordinary power and fascination for early humans. Drawing begins in gesture. Hand gesture appears to be a concomitant of lingual activity as we see in many hand movements that substitute for or are used along with speech (Corballis 2002). Children's drawings begin as motor activity (Gardner 1980: 28-29). First children scribble and then, on their own initiative, they relate these markings to the real world. They name what the scribbles suggest to them. Deliberate premeditated figurative drawing comes later. Like speech, drawing is an amazingly intricate way of unleashing symbolic mentation. Mimesis is a highly symbolic activity. Yet it seems to be innate in children. And to adults who have not developed this ability it appears that there is generally the capacity to learn drawing skills.

Information reaches the eye from the world and is projected onto our retina. This is then sent to the optical cortex. Vision requires many internal representations of the information at different anatomical locations in the brain. These have to be assembled so as to create a unified image. Then, in attempting to transpose this image into a drawn line, our brains convert images and ideas into the movements of the hand that the drawing requires. Different movements of the hand are initiated in different anatomical locations in the brain. These must be organized to be used in the correct time sequence. The goal is to reproduce on a flat surface an illusion of the world in which the original figure exists. As scientists such as Chris Frith have warned, "Even the simplest drawing depends on a complex interaction between many brain systems." (Frith *et al.* 1995: 203-206).

For the purpose of comparison with the Vero mammoth let us now look at a selection of the approximately 360 authenticated mammoth depictions of Eurasia. I believe that there appears to be more individual variation in mammoth imagery than

in that of other large mammals. Pleistocene artists were continuously arriving at graphic solutions to visual problems by means of meticulous observation.

In dealing with the mammoth they faced a particularly puzzling perspective problem. Mammoths like others of the elephant family had two tusks seen one behind the other. This required use of foreshortening which was not always clearly understood. To make it even more difficult, foreshortening was complicated by the presence of a trunk that went between the two tusks. It appears that many Pleistocene artists avoided the problem and did not show tusks. There is a possibility that some mammoths, in actuality, did not have tusks. Females and the young or malnourished might have lacked them. Many female Asian elephants today do not have tusks. Or it may be that the technical demands of this complicated perspective were too daunting for some artists working in graphic media that are two dimensional. It was easier to omit the tusks as did most of the sculptors who carved mammoths in stone or ivory. Stone tusks would have been difficult if not impossible to carve and would have broken quickly even while being worked. I will look at only a sampling of examples and only at those who worked in graphic media and who showed tusks so as to analyze the artists' experiments with this challenging problem of perspective.

In some cases the tusk was simplified and shown as a single line. Even with this simplification the positioning of this line was sometimes confused:

– **Rouffignac** (Fig. 3): this cave has about 180 images of mammoths. In the example shown here both tusks come from behind the trunk.

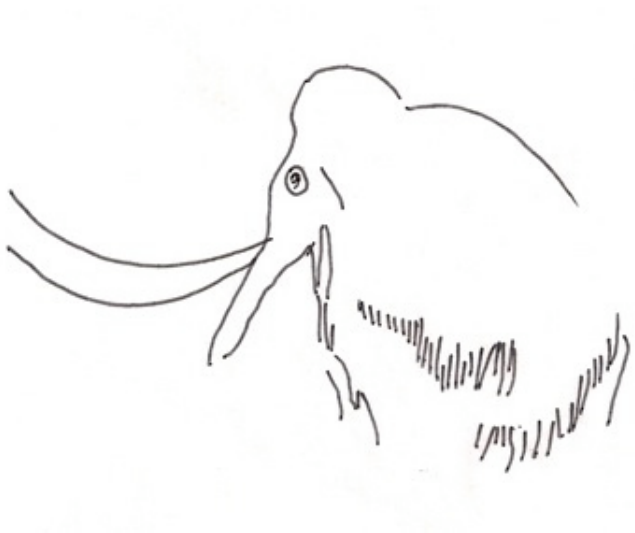

Fig. 3. Rouffignac. (Tracing, Alpert, after drawing by Henri Breuil).

– **Cussac** (Fig. 4): The engravings in this cave are highly personal expressions of an artist more interested in lyrical motion and sweep of line than in anatomical correctness. Both tusks appear to come from behind the trunk.

Fig. 4. Cussac. (Tracing, Alpert, after photograph by Norbert Aujoulat).

However in some cases the use of a line enabled the artist to work out the correct position of the tusks:

– **Rouffignac** (Fig. 5): in this parietal engraving the tusks are well positioned.

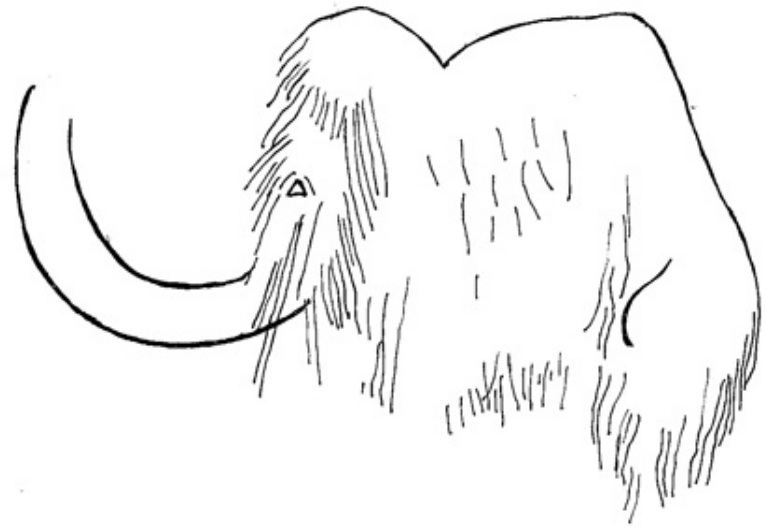

Fig. 5. Rouffignac. (Tracing, Alpert, after drawing by Henri Breuil).

– **Les Combarelles** (Fig. 6): In this parietal engraving the tusks are also correctly shown on either side of the swinging trunk. This trunk gives a sense of movement.

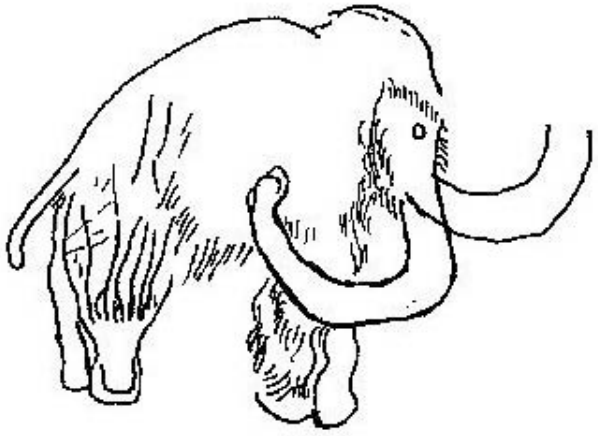

Fig. 6. Les Combarelles. (Tracing, Alpert, after drawing by Henri Breuil).

In some cases the tusks were more accurately depicted as two-dimensional by using a double line. But they were incorrectly positioned:

– **Rouffignac** (Fig. 7): The tusks are well depicted but both seem to be coming from behind the mammoth's trunk.

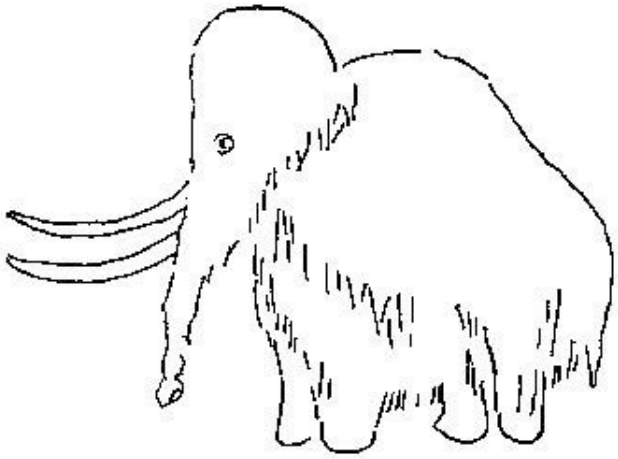

Fig. 7. Rouffignac. (Tracing, Alpert, after drawing by Henri Breuil).

– **Rouffignac** (Fig. 8): Both tusks seem to originate in front of the trunk.

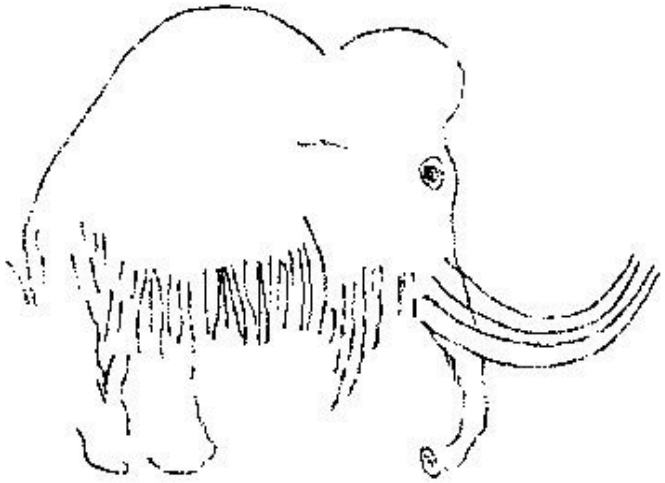

Fig. 8. Rouffignac. (Tracing, Alpert, after drawing by Henri Breuil).

In some cases the more realistic tusks were correctly positioned, but appear to have been an afterthought so that the closer tusk was drawn to cross over the lines for the trunk. Instead of hiding a part of the trunk the tusk appears transparent.

– **Rouffignac** (Fig. 9): This is one of the most detailed and accurate depictions of a mammoth. The eye and the furrowed brow are realistically depicted. The prehensile digits on the trunk are clearly shown and the anal flap has been well shown. The tusks are in good relation to the trunk. But the near tusk was added after the trunk and so it appears to be transparent.

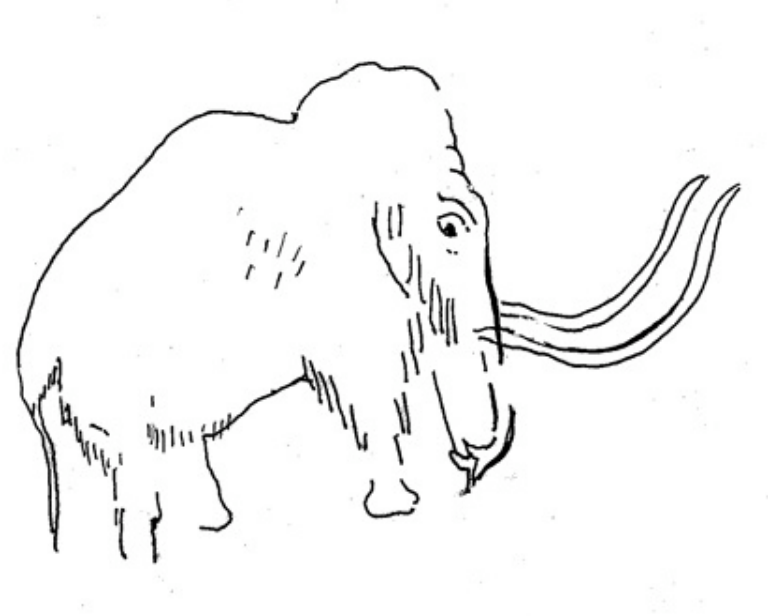

Fig. 9. Rouffignac. (Tracing, Alpert, after photograph by Jean Vertut).

– **Font de Gaume** (Fig. 10): The same as the previous example. The near tusk was added after the trunk was in place. It is apparent that the artist was struggling to work out the proper visual relationship.

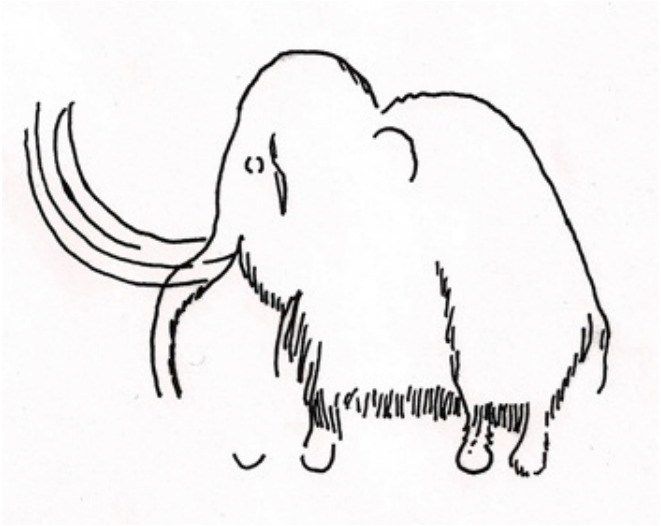

Fig. 10. Font de Gaume (Tracing, Alpert, after drawing by Henri Breuil).

In some cases the artist was able to avoid overlap by using what Henri Breuil has called “twisted perspective.” In this case the trunk is shown in profile with the tusks shown frontally.

– **La Baume-Latrone** (Fig. 11): This image was painted with fingers dipped in red clay. It is highly idiosyncratic with little attempt at visual accuracy. Nevertheless the prehensile digits of the trunk are shown. The mammoth is in profile but the tusks are splayed out in a frontal view. This seems to create an Ice Age version of Egyptian style perspective or “twisted perspective.”

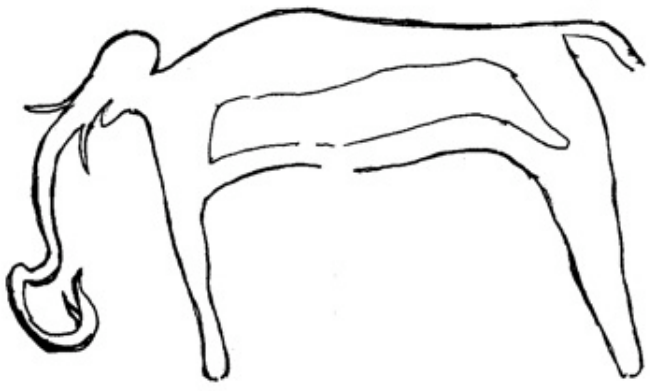

Fig. 11. La Baume Latrone. (Tracing, Alpert, after photograph by Jean Vertut).

– **Chauvet** (Fig. 12): This is possibly the oldest of the known Pleistocene decorated caves. In a section of Chauvet called *La Sacristie* that adjoins the last chamber is a small black painting of a mammoth in profile. To the left, over the single

tusk depicted in black, someone has scraped a large U form that appears white. The same has been done on the other side so that they create forward facing symmetrical tusks. They change the view to twisted perspective.

Fig. 12. Chauvet. (Photograph by Jean Clottes).

But these scraped marks achieve something else at the same time. They can be viewed as a single U or two joined U's in a double downward loop. This is a sign that Marc Azéma and Jean Clottes have called the "Chauvet-type sign" because they have seen it in a number of places in Chauvet. It has been seen in only one other cave in the Lot region of France (Azéma & Clottes 2008).

The Chauvet-type sign could have some unknown assigned meaning. It could have a sexual interpretation. Breasts are an obvious possibility. Azéma and Clottes say that they might suggest buttocks, vagina or testicles. Such confounding of male and female would not be unique in Paleolithic art (Alpert 2009: 93-96). If that is the case the positioning of the sign could overlay the mammoth's trunk with phallic or scatological suggestion. There is evidence of interest in both of these topics in Paleolithic art. Whatever its symbolic meaning, the artist, by using it in this way, was creating a visual pun.

As we know, a verbal pun occurs when a sound or word can be read with two different meanings. A visual pun is created when a line or form can be read in two different ways. Such visual play is of particular interest to me and plays a significant role in Pleistocene art as I show in my book *The Creative Ice Age Brain* where this kind of ludic activity is discussed at length (Alpert 2009*:* 59-183).

Now let us compare the Vero Beach mammoth with these European examples. What is most striking about the Vero image is its perfect photographic use of perspective. No other Pleistocene example achieved the same degree of photographic realism. That is an impressive feat. As an artist I have made engravings and I have also tried engraving on bone to simulate the experience of the Vero artist. The act of engraving is done by pushing the tool away so that the artist has to keep turning the matrix material in different directions. It is very difficult to achieve an accurate likeness in this manner if there is no two dimensional picture or sketch to serve as a model. The artist must have had a very clear mental image of the animal.

Bone, like wood, has a grain and this would undoubtedly have presented further problems for the artist. Although it does not appear to be the case it is not impossible that the artist used a very fine burin and scraped the line rather than actually engraving. That, in fact, seems to be the procedure used by archeologists who have attempted to replicate some of the engraved pieces found in France.

The eye seems to have been of interest to most of the artists who made mammoth images. If the mammoth's eye was like the elephant eye of today one can see how it would be compelling because it is large and appears soulful. Moreover it is the eye that gives life to an image. I thought it strange at first that the Vero animal did not seem to have an eye. Upon viewing the image with very large magnification I became aware that the eye is there in a natural depression in the bone. The untouched incorporation of natural features in the matrix of bone or stone is very consistent with the aesthetic of Franco-Cantabrian artists and is, in fact, quite universal. It is very common, for example, in the very much later Pueblo Indian art (Alpert 2009: 80-82,107-117). This simple touch along with the unpretentious, almost secretive, scale of the Vero mammoth enhances its validity to my mind. What is especially amazing in the Vero Beach engraving is that there seems to be not one hesitancy or false start. As we have just seen, Ice Age figures often have mistakes and corrections even when made by the less demanding techniques of painting or drawing.

In summary, I believe there are two major problems with accepting the authenticity of the Vero Beach mammoth : First, uniqueness. Where are other examples? How could this artist be the only one in all of North America? That does give us pause. But to be fair, there are other accepted examples of one-of-a-kind artifacts. For example, the painting of a quadruped from Apollo II Cave in Namibia is widely accepted as authentic. It is twice as old as the Vero engraving. Moreover, there is always a first find and we do not know what has yet to be discovered.

Another more serious problem is that this image is 'too good.' How could an individual who was not part of a tradition of artists attain this level of visual realism. The little mammoth is skillfully depicted in motion with weight on one front leg and with another leg about to receive the weight. The tusks and trunk are perfectly foreshortened and positioned. Is it simply too good to be true?

However, if we look back on the Ice Age art with which we are familiar, we find other authenticated examples that are also 'too good to be true.' The engravings in Trois Frères are an example. Another example is by the Lortet master who engraved a scene on the tine of an antler. The figures had to be engraved around the acutely curved surface. Two reindeer appear to cross a fish-filled stream. Everything is fit on this surface so that it takes up exactly the space available and revolves around the 360 degrees without overlap or constriction or correction and in this complex scene all animals are in proper proportion. The artist is even able to show foreshortening and motion by means of the convention of the head that is turned back. If we are going to doubt an artifact because it is too good we must doubt the authenticity of this piece as well.

It seems that throughout human history, beginning with the Pleistocene, there have existed some individuals with this exceptional, mysterious, graphically expressed cognitive ability. We think of the masters of Trois-Frères, La Madeleine, Lortet. We think of Leonardo, Rembrandt, Velazquez, Picasso. It is possible that the Vero master must join their ranks.

The criteria for assessing authenticity of any art are twofold. The first is that the piece be verified by scientific tests. Some of the tests used for the Vero mammoth were new and so a forger could not have been aware of them in order to attempt to circumvent them. The second hurdle is that of verification by connoisseurs who are specialists in the art of a specific period. Here again the mammoth has favorably impressed all those who have examined it including archeologists at the Smithsonian Institute. (D. Stanford, personal communication) Therefore, based on the opinions of both scientists and connoisseurs our conclusion must be that the Vero Beach mammoth is an authentic artifact from Pleistocene North America.

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