

In general, one or a few Clovis points in or near a mammoth carcass, along with other artifacts, are the most archaeologists can expect to find. The Greenbush Draw mammoth is, to my knowledge, unique in being speared but unbutchered. Field evidence of mammoth butchering or processing is also relatively rare, certainly compared to the abundant evidence of hunting and butchering of extinct taxa of bison in the High Plains by people armed with Folsom points (which are a few hundred years younger than Clovis points and have a longer flute). Bones of butchered or processed mammoths are found at kill sites such as Blackwater Draw, New Mexico; Dent, Colorado; Colby, Wyoming; and Murray Springs and other sites along the San Pedro in Arizona. Their absence from Folsom sites suggests that by 12,500 calendar years ago, mammoths were extinct in the western United States. While lacking even one unbroken Clovis point, the oldest Clovis site, Aubrey, in Denton County, Texas, is rich in workshop evidence and is 13,500 calendar years old (Ferring 2001).

Based on what they knew of other Clovis sites in Cochise County, Vance Haynes and Pete Mehringer discovered a particularly informative site, Murray Springs. To the best of my knowledge, Vance and Pete are the only scientists to discover a Clovis butcher/kill site with extinct animal bones. Almost invariably it is amateurs—cowboys, hunters, farmers, hikers—who make the initial discoveries.

Murray Springs is a superb example of a crucial feature lacking in the search for pre-Clovis archaeology: site replication. It displayed many of the major features of the Lehner site in addition to a few of its own.* Between 1966 and 1971, with National Geographic Society grants, Haynes and his field team uncovered and excavated a partly butchered mammoth and discovered fossil proboscidean tracks and bones of eleven young bison in adjoining kill sites. In addition they found stone knives, scrapers, 16 Clovis points (many broken or reduced in size beyond the point of resharpening), and a dire wolf skull, all buried just beneath the Clanton Clay deposit, a “black mat” or stratigraphic marker which blanketed the site like a shroud. Possibly the Clovis hunters guarding their meat cache dispatched the dire wolf, which was attracted by the butchering. The most

*Both the Lehner and Murray Springs sites are held by the Bureau of Land Management San Pedro Riparian National Conservation Area, with headquarters in Sierra Vista, Arizona. The bureau can provide information on a self-guided nature trail at Murray Springs (for information consult the nearby San Pedro River interpretive center). A master plan exists for a state-of-the-art interpretive center, but it will only be realized if the public comes to appreciate the importance of Arizona’s mammoths and their hunters. The proboscidean ghosts of the San Pedro River have a long way to go to catch up with the interest the public has in the ghosts of the O.K. Corral in Tombstone.

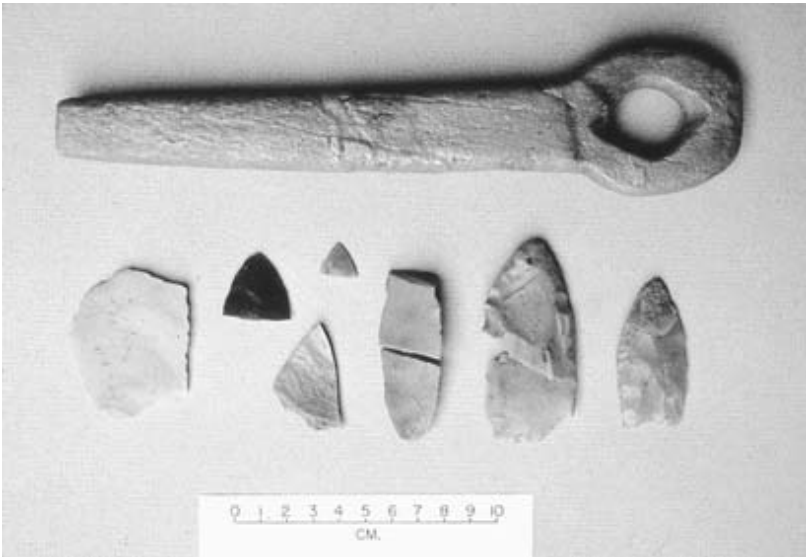


Plate 15. Clovis artifacts. Photo by C. Vance Haynes.

remarkable find was a shaft straightener made of mammoth bone with a hole in one end, like a giant needle. Called *batons de commandant*, these were well known in the Paleolithic of the Old World, but this is the only shaft straightener to have been found with a mammoth at a Clovis site.

Murray Springs yielded a more detailed stratigraphic record than the other Clovis sites. (All are known or thought to be contemporary; see table 7.) Unfortunately, it did not yield a fossil pollen record, which had been of great help in interpreting stratigraphy at the Lehner site. These results intrigued pollen analysts attending the first International Palynological Conference at the University of Arizona in Tucson in 1961. While Pete Mehringer was able to extract pollen at the Lehner site, he could not recover a pollen profile of the environment associated with the Murray Springs mammoth. His pollen profiles at the Lehner site indicated somewhat wetter conditions in the time of the mammoth hunters. Some drying out occurred subsequently, with the fossil pollen revealing the invasion within the last 4,000 years of a Chihuahuan Desert shrub, Indian tea (an *Ephedra* species in the same genus as Mormon tea in the Grand Canyon).

The first Clovis site, rich not only in Clovis points but also Folsom material and younger archaeology, was found near Clovis, New Mexico in the 1930s (Boldurian and Cotter 1999). An apparent frozen meat cache