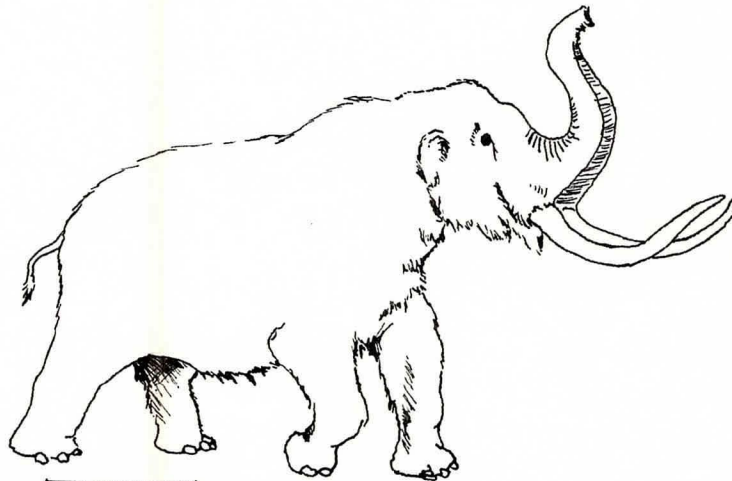


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EARLY MAN AND HIS INFLUENCE ON AND ASSOCIATION WITH LATE PLEISTOCENE

FAUNA IN MIDDLE AMERICA

BY: Dale R. Croes

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INSTRUCTOR: A. D. Krüger

INTRODUCTION

Early man arrived in Middle America from the north sometime within the Pleistocene. Almost all evidence of his presence indicates an arrival no earlier than 40,000 yrs. B.P. and probably later than 35,000 B.P.. [The earliest men were probably not big-game-hunters, but more of a possible pre-projectile-point group of people. From about 11,500 B.P. to 9,000 B.P. there are some definite direct associations between man and the late Pleistocene animals. These animals were mainly large terrestrial herbivores hunted by man until their extinction. This period occurred at the end of the Pleistocene ice age. The discovery of human artifacts directly associated with large Pleistocene herbivores in kill-sites illustrates man's utilization of these animals in his diet. The Purpose of this paper is not to stipulate the belief that early man was primarily a big-game-hunter, since there are some indications that he was not, but most evidence of early man in Middle America was indicated by kill-sites where large Pleistocene animals were slaughtered.] *meaning?*

The large Pleistocene animals generally associated with man both stratigraphically and directly (through artifact association) are mammoths, mastodons, camels, horses, and bison. One thing I think should be pointed out now is that all these animals, though extinct in many parts of the world, do have directly related ancestors still surviving in the present world. The present day related late-Pleistocene-type animals are elephants, modern horses, modern camels (in both the New and Old World), and cattle (even buffalo in the New World). For this reason they really have not expired from existence, but have, for some unanswered reason, become extinct in certain areas

while some close relatives have generally survived. It is also possible importance that these related-pleistocene-type animals, that have survived, have almost all become closely associated, if not completely controlled, by man through different degrees of domestication. The simple fact that certain breeds have been able to live with man may very well be the reason for their survival.

EVIDENCE OF MAN'S PRESENCE AND ASSOCIATION WITH LATE PLEISTOCENE ANIMALS

In this section I will briefly cover the well documented evidence of man's association with Pleistocene fauna. Much of this evidence is derived from kill-sites and, therefore, deals with man the hunter. I agree with Michael Coe when he states that early man probably ate whatever he could get, but, I believe, that some of the evidence of early man indicates he was pretty efficient at getting large Pleistocene herbivores.

TEQUIXQUIAC:

This site is valuable since it seems to present a good example of early man's tool industry. The assemblage includes both stone and bone artifacts. The stone tools include a variety of scrapers, unifacial blades with lanceolate contours, a fragment of an asymmetrical bifacial knife with a general shape which, curiously enough, is reminiscent of the well-known "Cody-knives". The bone artifacts are principally awls, made on splinters. Despite the absence of projectile points, the predominance of implements with a cutting or scraping function indicates subsistence activities derived from hunting. The presence of bone artifacts is important, and supports Krieger's theories about

a possible primitive osseous industry accompanying the earliest lithic complexes in North America. (Krieger, 1951).

SANTA ISABEL IZTAPAN - two mammoth kill-sites

Mammoth #1, 1952:

Location: The bones were embedded in a lake deposit; a fine green muck of the Upper Becerra.

Mammoth: It was identified as a imperial mammoth (*Mammuthus (archidiskodon) imperator*, Leidy). About 80% of the total skeleton was recovered. One femur lay six feet away from the rest of the skeleton and it was probably moved there during the butchering process.

Artifacts: One projectile point was found and it was unfluted and slightly stemmed. It bears a general resemblance to the Scottsbluff points of the United States.

b) broken obsidian scraper: It lay near a rib and probably was part of the butchering tools.

c) obsidian scraper and possible spokeshave: One edge appears to be a normal scraper while the other has three concavities which may have been used as a spokeshave.

d) end scraper (?): triangular shape.

e) prismatic flake knife: obsidian with pressure retouching.

f) elongated implement of gray flint: at one end is a sort of curved beak or hook. It may have been used for working bone.

Mammoth #2, 1954:

Location: Same geological horizon as #1 and less than 1/2 mile from the first.

Mammoth: The skeleton was more complete than the first, but there was even clearer evidence that the animal had been butchered. The skull was overturned and the base smashed, probably in order to extract the brains. Many of the other bones show cuts and grooves made by stone tools.

All the bones were found totally displaced and out of anatomical relation, with the remarkable exception of the right hind leg. The right hind leg is not only found complete, but also in complete articulation. Its articulation was probably due to the fact that the leg could not be reached during the task of butchering. The foot of this leg was sunk deeply into the mud.

The pelvic girdle and articulated hind leg provide the only indications as to the direction the mammoth was headed after being trapped. It is suggested he was traveling towards the east, perhaps trying to reach firm land at the east edge of the lake.

Artifacts: a) lanceolate atlatl (dart) point: found near a rib. It is considered to be similar to Angostura points.

b) Lerma point: "laural-leaf" type shape; found under a mass of ribs and vertebrae.

c) broken bifacial implement: apparently the remnant of a knife or larger point.

MAMMOTH EXCAVATED IN NORTHERN-MOST PART OF MEXICO CITY, 1957

Location: Upper Becerra

Artifacts: In situ with the rest of the bones was a utilized obsidian flake and no less than 59 small chips of basalt and obsidian which appears to be waste products of stone flaking. An explanation would

be that the hunters were busy resharpening the cutting edges of their blades and other butchering tools at the very spot of the kill.

HUEYATLACO, VALSEQUILLO - Cynthia Irwin-Williams, 1964.

Location: Site is situated in deposits laid down that indicate the existence of a stream or streams in the locality over a period of sometime. These favorable conditions repeatedly attracted to the site mammoth, mastodon, horse, camel, four-horned antelope, smilodon, dire wolf, tapir, glyptodon, and therefore attracted the hunter, man.

Artifacts: In one strata (unit C) projectile points, cutting edges, scrapers, perforators, and possibly burins. The character of the assemblage as a whole indicates the importance of hunting and processing game, "specifically horse, camel, four-horned antelope, and mammoth."(Irwin-Williams). A brief hunting camp at or near a kill-site best fits these conditions.

In a lower strata a larger bifacial bipoined piece was recovered in direct association with the partially articulated portion of a horse.

In the same group the point of a projectile point or knife was recovered under a vertebrae of the same horse. "Undoubtedly a single horse "kill" and possibly a brief camp".(Irwin- Williams)

FLUTED POINTS

These are of interest since they are often associated with Pleistocene kill-sites in the United States. In Middle America, what few fluted points are found, are usually in the northern area. (see map page 6 for locations of fluted points and important early man sites)



LOCATION OF FLUTED POINT FINDS AND WELL DOCUMENTED EARLY MAN SITES
IN MEXICO.

----- : This represents the southern migration routes of extinct Pleistocene herbivores in Mexico. (after Maldonado-Koerdell, 1964)

WHAT INFERENCES CAN BE SUGGESTED AS TO HOW THESE LATE PLEISTOCENE
ANIMALS WERE HUNTED ?

The mammoths are about the only Pleistocene animals found in well documented kill-sites in Middle America. The best documented sites are the two mammoths found at Santa Isabel Iztapan. But what can generally be said about the location of sites of Pleistocene animal kill-sites in Middle America? First they are usually near water, either a waterway (stream or river) or a swampy area (edge of lake or swamp). Second the animal almost always appears to be trapped, usually stuck in the mud. And thirdly the animals are killed, after being trapped, with spears.

The second mammoth at Santa Isabel Iztapan is a unique example. The animal's left hind leg was stuck in the muck. The animal could have slide into this position while being driven by hunters. Since there are indications that he was heading east, attempting to reach firmer ground, it may be that after sliding into the muck he endeavored to turn around and return towards the shore. Can elephants be easily driven directionally by man? No, this does not seem to be the case, but by the use of a fire wall, an elephant could be driven into a desired direction.

After the mammoth was helplessly mired, the hunters evidently approached their prey and hurdled spears into its body. The spears were all of a thrust type and had no barbs. By hurdling a spear by hand a efficient incertion into the body could be accomplished. However if these hunters were assisted by spearthrowers or atlatl they could propel a spear far deeper into a body and therefore be more effective. It is possible that these early people had such equipment

since the projectile points were large and as James H. Kellar stated, "It might also be proposed that the killing of large animal forms required the use of projectiles thrown with more impetus than that provided by the arm alone!" (The Atlatl in North America, James H. Kellar, 1955). There is no direct evidence of the use of the atlatl by these early hunters, but evidence of its use early in the Mesolithic cultures of Tamaulipas and use of it with ceremonial significance in later mesoamerican civilizations plus the use during the present century of it by the peoples in the vicinity of Lake Patzcuaro and Lake Texcoco (Kellar, 1955) should be considered.

After the mammoth was killed there was the task of butchering and preparation. The head of the second mammoth at Iztapan was pulled back over the body and the brains removed by breaking open the skull. The brains of an elephant are four times as large as a man's and therefore quite a bulk. The scrapers could have been used to remove and prepare the mammoth's thick pelt. This pelt would be excellent for clothing and shelter. The knives found were undoubtedly used to remove and cut up the meat.

WHERE THESE HUNTERS WHO SYSTEMATICALLY HUNTED LARGE PLEISTOCENE
HERBIVORES ?

Did these kill-sites represent a group of people who spent a large part of their energies in the pursuit of large Pleistocene animals? This is a big question causing some controversy in archaeological circles. MacNeish, while describing the early "Ajuerado Phase" in the Tehuacan area of Mexico, stated this opinion:

"Although they hunted such animals as horses and ante-

lope of now-extinct species during the earliest part of the phase, even then most of their meat came from smaller game." They "were far from the great hunters they supposed to have been. As one of my colleagues said: 'They probably found one mammoth in a lifetime and never got over talking about it.' " (MacNeish, 1964)

I would like to suggest another opinion. MacNeish was probably correct in saying ^{that} these people he studied in the Tehuacan area were not specialized big-game-hunters because they seemed to move to different seasonal camps in an annual cycle. But I certainly would not judge out the possibility that some other microband groups did primarily hunt the big game. The type of community pattern that MacNeish proposes would not be especially suitable for a group of people pursuing big game. A group of big-game-hunters would generally not follow a seasonal round, but would follow the animals which they hunt.

The suggestion I am proposing here is that microbands of specialized Pleistocene herbivore hunters may have lived contemporaneously with microbands who changed residence seasonally and who were probably present earlier in Mesoamerica; before the intrusion of the big-game-hunters. Part of the reason I propose this is that ethnographically a group of specialized elephant hunters were found to be living in the same general territory as groups of small game hunters and gatherers^{RS} in Africa. As long as these groups specialized in different means of food utilization they could adjust easily to living in close proximity without especially effecting one another. Here is a description of this contemporaneous specialized elephant hunting group:

"The Liangulu are the true elephant people of Africa. The elephant supplies all their needs, and hunting it was once their entire life. Originally the pattern of this life would have been extremely simple. The males of a family would kill an elephant, and a group would camp near the carcass until they had eaten the meat or dry it out into biltong. They would then kill another and camp near that one. The name of the tribe is derived from a Girianea word, ariagula, meaning eaters of meat.

The weapon they used was a bow, known to the native hunters as the Big Bow." (Massacre of the Elephants, D. Holman.)

The description implies that the specialized hunters camped near the carcass. If this was the case with the proposed mammoth hunters there would be little evidence of their camps (which is the case) and finding the remains would be difficult.

Would hunting these large mammoths be a very difficult job? No, not if the group was specialized to carry out such a hunt. A mammoth or elephant must drink large quantities of water every day and, therefore, all the hunters would have to do is wait at a waterhole until one approaches then drive it into a trap (pitfall) or into the mud of the waterhole by using fire or by scaring the animal. A modern elephant becomes trapped easily because of its bulk and because the shape of its foot is such that once stuck escape is especially difficult.

The changing of the climates to a drying period at the end of the Pleistocene would also be an advantage to a group of early hunters. Modern elephants must remain near permanent water in dry weather. As dry weather became more prevalent these mammoths would be forced

to remain near such large watering areas as Lake Texcoco. This would certainly be an advantage to early hunters and makes his job much easier.

If these people did follow around the animals they hunted, then they would be wanderers dependent on animal movements and they would easily spread over large areas. The most likely migration routes for these proposed hunters would undoubtedly correspond closely to the hunted animal's migration routes. The southern migration routes of most extinct Pleistocene animals is shown on the map page 6. The spread of human hunters would be expected to fall along these routes, which, according to the map, seems to be the case. The only deviation on the map is evidence of early man along the Rio Grande, but man often migrates along rivers. If hunting man did follow these animal migration routes then one would expect a contact between hunting groups from the western route and eastern route. This cannot be proven, but it is interesting that hypotheses have been presented in which the western Old Cordilleran tradition comes into contact with the eastern Big-Game-Hunting tradition in this vicinity. The mixture of cascade-like points (Lerma) and more eastern-like points (Scottsbluff-like and Angostura-like points) at the Iztapan mammoth sites have been used to support such hypotheses.

As the late Pleistocene herbivores became extinct the proposed early hunters would be forced to adapt to a new way of life similar to the small-game hunters and gatherers around them. This seems to have been the case in Africa where the elephant hunters were forced to stop their hunt because of political force and become small game hunters and gatherers or small scale agriculturalists.

WHAT EFFECT COULD MAN HAVE ON PLEISTOCENE EXTINCTION ?

Views differ again on the subject of Pleistocene extinction, and man's role in it. I would suggest man had a part in their extinction in areas like the Valley of Mexico, but changing climates and vegetation may have ultimately caused their extinction without man. The extinction of Pleistocene herbivores and the appearance of hunting man seemed to coincide. Changing weather would certainly effect these animals, but the appearance of a new and dangerous predator may have helped to cause the scales to tip towards extinction. The animals were forced closer to permanent watering areas which would only seem to assist man in trapping the larger herbivores (i.e. mastodons and mammoths) This new and certainly dangerous predator, hunting man, also was fighting for survival in a changing time and could have greatly offset the predator to prey balance causing rapid extinction. This possibility certainly has not been demonstrated, but hunting man's appearance undoubtedly had an effect on these Pleistocene herbivores. The question is whether or not man triggered extinction of these herbivores.

If it is possible that there were microbands of specialized big-game hunters in the Middle America who depended almost wholly on the hunt, then man's effect certainly could have caused the ultimate extinction in this part of the New World. This suggestion is certainly possible and I believe it should not be considered out of the capability-range of early man.

CONCLUSION (Please insert probably and perhaps where needed)

Early Man appears in Middle America as a hunter of big game at the beginning of the end of the Pleistocene Ice Age. His wide spread and rapid distribution can only be interpreted by myself as a result of hunters seeking their prey over wide areas, and not as a group with annual seasonal rounds. These big-game-hunters were contemporaneous with other small groups of small-game-hunters and gatherers who did have seasonal rounds and who were probably in Middle America earlier. Once hunting man arrived in Middle America he offset the predator-prey relationship and helped trigger the Pleistocene extinction. After the extinction of his Pleistocene prey, man the hunter was forced to adapt to a different form of existence or become extinct himself, as did many large Pleistocene carnivores of that time. He re-adapted as a small-game-hunter and gatherer and remained in Middle America to survive the Hypsithermal.

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