

EXAMINATION OF SOME ABORIGINAL REMAINS ALONG THE

MISSOURI RIVER BLUFFS, IN KANSAS AND NEBRASKA.

By Gerard Fowke.

Vicinity of White Cloud, Kansas.

About four miles southeast of White Cloud, Kansas, is the "Taylor Mound," from which Zimmerman and Park took 56 skeletons, or portions of skeletons, in a space not more than six by twenty feet. This was clearly an intrusive, communal burial, of skeletons carried from some other point and interred in the mound which owed its origin to persons who had piled it up at some previous time. The bones, which were not arranged in any order, were 30 inches beneath the present surface of the mound, but this does not mean they were no deeper originally, as the mound has been plowed for many years and is in a situation where it will easily wear down when cultivated.

A few feet away, at a depth of seven feet, other bones, or fragments of bones, were found in a mass of burned clay. A cremation had taken place at some point away from the mound, and the resultant burned earth with so much of the bone matter as was not destroyed by the fire, was carried here and buried. The depth in this instance is not significant; the earth is loose and very

easily dug; besides the grave pit was near the margin of the ^mound and earth had washed down over it from above.

Some stones, carried from neighboring ravines have been exposed by the wear due to erosion from natural causes and from cultivation. The main portion of the structure is still intact, and it is probable that no deposits belonging to it at the time of its construction, have been unearthed. A systematic exploration, showing the original construction as well as the alterations resulting from later burials, is much to be desired.

While this is the largest mound in the vicinity, and is claimed to be the largest mound in Kansas, it is not different except in size from many others within a few miles. All of them are made of the same earth as that which lies around them--a light, sandy loess which is easily removed with a shovel, requiring no picking or other loosening. In fact, it is almost as easy to dig as loose sand would be. Sometimes there are flat limestones in or around the graves; these are found not far away in the ravines.

Not far from this mound is a large lodge-site; one of the so-called "buffalo wallows" as they are commonly known. These are the ruins of aboriginal houses. Many of them have been examined. The general construction is the same, the only practical difference being that some are square in outline, others round. This difference is not always apparent prior to the excavation. In the

making, a pit was dug, square or round as desired, and the earth thrown out on every side. Posts were then set around the margin of the excavation, and the house built in the same manner as those with which we are familiar from accounts of early travelers. Zimmerman and Park have a quantity of hard-burned earth in which are cavities and depressions due to the burning of (straw, grass, twigs, and poles, used in the construction of the houses. This results from the destruction of the houses by fire; sometimes the floor has a layer of this burned material which is evidently due to the falling in of the roof. Most of these are ^{on} the hill-tops, but some of them are on narrow ridges leading from the high land to the creek or river bottoms. (In the latter event there is always a village-site on the low ground bordering the stream.) The relics gathered up on these village-sites are in no wise different from those found when the lodge-sites are excavated; and also are of the same character as those picked up on what are no doubt modern village-sites in the vicinity. This fact militates against the idea that the lodge-sites are extremely ancient. /

Iowa Point.

On a low hill, cut off on every side by steep ravines, is a small mound containing a cist grave. The bottom of this, which was dug slightly below the natural surface, was covered with a pavement of limestone slabs. The grave was roughly oval or triangular in outline; measuring about seven by nine feet. Around it was a wall of similar stones, set in contact and sloping outward at an angle of about forty degrees from the vertical. There was nothing whatever in this grave.

At the edge of the mound was a box grave $5\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$ feet, the longer axis directed from and to the mound's center. It was made of small flat stones built up like a wall, the only grave of which I could learn that had any resemblance to the vault-graves farther down the Missouri. In the grave were two skulls and some other bones, all bunched in the northern end.

Near the mouth of the Nemaha river.

Lewis and Clark, in their journal, mention that when camped near the mouth of the Nemaha, one or both of them went to an Indian village about two miles up the stream. He--or they--climbed a low ridge near the river and stood on a mound which commanded a fine view of the surrounding country. There is a dispute as to the site of this mound; but the journal plainly says it was on the lower (east) side of a little creek which comes in here. Two miles farther up is a larger mound on higher ground which is generally supposed to be the one meant by the explorer; but this is on the other side of the creek and at some distance from the Pawnee village which was located near the mouth of the creek, on the lower side. The ground where this village stood is covered over a space of several acres with the ordinary ^{remains} debris of an Indian village; (and it is significant that all the relics found are so similar to those which are called "ancient" when found in the lodge-sites, that no one could determine from inspection which kind came from which place.) This village was occupied by the Pawnees until 1837 (?), when the Iowas and Otoes made a sortie upon the unsuspecting inhabitants and killed all of them they could overcome. At least two Iowa women are still living on the reservation who remember seeing dead bodies lying around wherever the invaders could find and kill a resident. Great numbers of relics have been gathered up on the site of this village, and at every plowing more are found. Unless it be in the markings on the pottery, no distinction can be made

between these specimens and similar ones from other localities.

A short distance below, the explorers carved their names on a rock projected into the stream. Accounts as to this spot differ: it is generally stated that in making a road around here, the rock containing the names was blasted away; but a man in the neighborhood who claims to know the exact spot says the blasting did not extend quite so far and that the names are covered by a mass of earth and rock which slid from the bluff many years ago. If this be true, a thrill awaits the man who finds the names some centuries from now when the river has washed away all this accumulated material.

Vicinity of Troy, Kansas.

Near the mouth of Wolf river is a village-site on which Dr. R. S. Dinsmore of Troy has counted 125 tipi sites. Relics are very abundant here, especially the small chert "thumb-scrapers," which outnumber all other specimens.

Mouth of Mosquito Creek.

Four miles ^{north} (east) of Troy, on a ridge so steep that its top is inaccessible from either side, and so narrow that a wagon would make a track on each slope, is a little mound whose nature would not be suspected. Doctor Dinsmore was on this ridge one day and noticed a flat limestone rock. Knowing that it had no place in the loess, he began digging to ascertain the reason for it being there. At a depth of a few inches he found bones, and soon unearthed a number of skulls, with only his hands or a stick. Coming back later with tools, he found, in all, 56 skulls. Afterward he found others; and persons in the neighborhood have exhumed many more. The deposit represents a communal burial, from a village which probably stood on a level creek bottom not far away. A few skeletons showed an attempt at orderly arrangement; these were of individuals who had probably not been dead long at the time of the general burial. Most of the bones, however, skulls and others, were piled in the smallest possible area, as if gathered up in sacks or baskets from previous burials and carried here for re-interment. The soil is so loose as to

be easily dug with the hands, like sand; but at the same time so fine and close packed as to shed water almost like a roof. Owing to the steep slope at every point except toward the summit of the ridge, there must be some erosion, and consequently the age of the burials can not be great. Yet, these conditions prevail in other places where a great antiquity is claimed for the remains. Frost must necessarily disintegrate the soil to some extent; and then the wind or rain must carry away the loosened portions. The shape of the little mound shows that the ridge was essentially identical in shape when the burials were made, with its present aspect. The bones also are comparatively fresh in appearance, and it may be considered certain that they can not date back many generations.)

On the top of a hill rising from the opposite side of Mosquito creek, Doctor Dinsmore found a low mound which, like that just described, would not have been suspected as such but for a stone projecting from the surface. Under this stone, with eight inches of earth intervening, was a skull so completely mineralized that it looks as if it were carved from a block of limestone. No other bones of the body to which it belonged remained, though traces in the surrounding earth showed that at least the larger bones and perhaps the entire skeleton had been deposited. Bones in other parts of the mound were in their natural

condition; that is they were not altered from their ordinary appearance, although only in fragments. It is remarkable that this entire cranium should thus change, while all the other bones, even the jaw, had disappeared. The description of this find is from Doctor Dinsmore, who has the skull in his office. (Possibly he may be in error in stating that traces were found of other bones belonging with it. These may have belonged to another individual. The soil is ordinary sandy loess, containing lime but not in such quantity as to account for this alteration.) Perhaps the skull may be from an older burial somewhere, the petrification having taken place before it was buried here. (It might be well to get the skull, if he will forward it (from Dr. R. S. Dinsmore, Troy, Kansas) for examination.) Doctor Dinsmore also has a singular object of pottery which was found near St. Joe, I believe. It is saucer-shaped, 22 inches across the rim, about two inches in thickness, and with a central depression inside and a corresponding protuberance on the bottom. He calls it a "metate." but it shows no marks of use.

Rulo, Nebraska.

Particular attention was paid to conditions a mile north of Rulo, where it is reported that human skeletons were found in the Kansan drift. It was not the intention of the explorer to have it understood that these remains were in undisturbed drift, but such is the impression that has gained credence.

Since the country was settled by whites, a matter of fifty or sixty years the road crossing this ravine on the section line nearest the river, about three-eighths of a mile away, followed the natural contour and the crossing was made without difficulty. At present there is a steep bank on each side, which has made a bridge necessary; and the washout, creating this now extends some distance up the ravine. From this point to the Missouri river, the banks are vertical or nearly so on each side of the little stream. It was in the bank on the south side that the bones were found. It is stated they were seven feet under the surface; if so, there must have been a mound above them, for the lowest excavation does not reach over five feet below the present level of the ground, and at that extends slightly below the bottom of the grave.

Within forty years the Missouri river which is now more than a mile away toward the Missouri shore, flowed at the foot of a slight bluff terminating the slope from the high land toward the west; there was formerly a steam-

boat landing on the upper side of the ravine. On the lower side is a triangular area of about an acre, bounded by the bluff, the river bank, and the ravine. This was an excellent location for an Indian village or camp. A narrow level strip extends from the mouth of the ravine to a point near the bridge, some distance above where the remains were found. It is quite clear that the skeletons were the remains of individuals who had died at the camp on the river's bank, and had been carried here for burial. This may have occurred within the last hundred years, or in fact at any time while the Indians were still living in this vicinity.

The flood level of the Missouri is not more than fifteen feet lower than the level space along the sides of the ravine. The little (intermittent) stream has cut down this depth through a deposit which is composed of river sediment, wash from the hills on each side, and material carried from higher levels by the brook itself in rainy seasons. At only one point is there a real glacial deposit, and this does not extend for more than fifty feet horizontally, and does not reach to the top of the bank. It is at some distance from the graves, and may be due to a lobe of the ice or to an iceberg. However formed or deposited here, it has no relation whatever to the skeleton. In a sense, the material in which they were buried is "Kansan Drift"; but it is drift which has only recently come into its present position.

Near Howe, Nebraska.

Mr. Sam P. Hughes, who lives near Howe, has done considerable excavating in that vicinity. He is an intelligent man, and an ardent student, but his ideas in regard to the age of his discoveries need much revision downward.) His chief work has been done north of Howe at a place nine miles from the nearest point on the Missouri river. Here is a small level area at the end of a ridge sloping away in every direction except at the narrow isthmus connecting it with the fields beyond, which are at a level only slightly higher. (Thus, there is not) chance for any accumulation from the adjacent surface.) On this ridge are a few lodge-sites which Hughes has excavated. In every respect they are similar to lodge-sites reported from other localities in this section. The walls, the depression, the floor, the fire-place, are all the same. The depressions are filled with earth to a depth of 18 to 22 inches above the level of the old floor; and Hughes reports that wherever he has dug on this ridge, he has found flint chips, charcoal, fragments of pottery, and scraps of bone to about the same depth. (Next below the soil is the Kansan glacial drift; but the assertion that objects found at this depth are of the same age as the drift is not necessarily correct.)

Peru, Nebraska.

On various hills in the vicinity of Peru are lodge-sites, some of them circular, some rectangular, some with

straight sides and rounded corners. Most of them have been dug in at random; in every case after a certain depth of accumulated earth and trash is passed through, there is a layer of clay which formed the roof, and beneath this the hard earth floor with fire-place usually in the center but sometimes a little toward one side.

Papillion, Nebraska.

At the time of my visit, Sterns of Peabody Museum was working near here. He described himself as "the man who is extremely anxious to find a glacial or other very ancient man, but so far has not succeeded in getting track of him." Sterns does not claim a period antedating the Indian, for anything he had then unearthed--meaning the known Indian tribes.

Vicinity of Omaha, Nebraska.

To the southward of Omaha are many lodge-sites of varying depths and diameters. The deepest one reported had a depth of nine feet below the surrounding surface, and at the bottom of this was a pit (or "cache", as they are locally known) with an additional depth of four feet, or fourteen feet of excavation in all. This was near the so-called "cannibal house", where fourteen human frontal bones were found under conditions which indicate they had belonged to individuals who were eaten by other inmates of the lodge.

A short distance from these sites, across a ravine, is a bare, narrow ridge, very steep on each side so that erosion would readily act. On the sloping summit of this are three small mounds which cover communal burials. From one of these, the one farthest from the summit of the hill, more than 80 skulls were taken and boys in the neighborhood have since taken many more. They are all of the ordinary Indian type, and can not have been buried more than a few generations ago; but this fact has not prevented an age of "twenty thousand years" being assigned to them. There is absolutely no reason for fixing this, or any other date; there is nothing whatever to indicate the age, but 200 years would probably not be far from the mark.

"Long's Hill", near Omaha, Nebraska.

This ridge has attained some notoriety as the site of Gilder's discovery of the "Nebraska Man." The claim is made that human bones were found at a depth of fourteen feet in absolutely undisturbed loess. The hill is a narrow ridge, facing the river on one side and a deep ravine on the other. It is somewhat winding in its course and is connected with more level land in the rear at about half a mile from its end. A wagon road up the point, from the river bottom to the summit, shows undisturbed loess from foot to summit. There is no possibility of accumulation by wash or in any other manner except decaying vegetation at any point near the end of the ridge.

Along the narrow summit are several small mounds. Some of these, as shown by excavation, cover graves, and the presumption is that all of them mark burial places.

It is needless to make any resume of Gilder's report, as it is so well known, further than to say that he found burials and fragmentary human bones at various levels from 2 1/2 to 14 feet. At 4 1/2 feet were burned bones lying upon burned earth and mingled with it. This layer, burned hard as a brick, served to prevent water from penetrating the earth immediately below it; and it is here that the deepest remains were found.

There are three ways, and only three in which they could get there:--

1--. They were washed in when the loess was deposited, as claimed by the discoverers and by some of the Nebraska geologists.

In support of this view is the assertion that the bones were water-worn. On this point I can no venture any opinion, as I have not seen them. But I have found bones in mounds and in other situations where such wear was impossible and yet having the smoothed and rounded appearance characteristic of such action by water or the elements.

In support of this theory, too, is the positive statement of Nebraska geologists who have had ample opportunity to become familiar with loess in all its phases; and they claim the deposit is the original and has not been disturbed.

It is necessary for these advocates, however, to tell where such fragments of bones could have come from and how they could have been washed to the place where found, when all these bluffs were covered with water, as they had to be at that time.

2--. The bones could have been carried by rodents into their burrows or runways, as Hrdlicka suggests. In this case the material in contact with the bones would have to be somewhat different in appearance and consistency from that which lay a few inches or perhaps only an inch, away. The Nebraska men say this was not the case.

3--. There may have been an excavation or pit similar to that in which the Hurons buried their dead. But as no such burial pits have been discovered in this part of the country,

this supposition must be excluded.

A corollary to the last is that a deep but small pit similar to the so-called "caches" in the Lodge-sites may have been dug here and the bones thrown in. There is no indication whatever of a lodge-site or any other form of habitation at this point; but I have found such pits in the vicinity of Indian houses, though not just on the site. The deepest one I have ever found was ten and a half feet and less than six feet in diameter. There would be no difficulty in digging into this loose material as far as an excavator cared to go, until he had reached a depth at which he could no longer get the loosened earth to the surface of the ground. As mentioned above, a pit south of Omaha had a depth of thirteen feet, or only one foot less than is claimed for this--or rather for the greatest depth at which it is claimed fragments of bones were found.

The objection made to this theory is that the earth thrown out of the hole was unmixed, presenting throughout the appearance and consistency of loess as it occurs where exposed in ravines or on slopes in the vicinity. It is contended that if any previous excavation had been made here, and filled up afterward, the mixed earth would be easily discernible.

As a rule, this is true; but when dry loose earth of homogeneous consistency is thrown out of a pit and then thrown in again without becoming mixed with any other, it is

sometimes impossible to distinguish it at a later excavation. This is especially true of earth free from vegetable matter, as ordinary sand; or composed largely of vegetable mould, as the soil in overflow lands which have built up mainly from floods carrying uniform soil sediment. The line of demarkation between the dug and the undug earth in such conditions may become indistinguishable except when a vertical face is made which shall show a clear section of both, in contact.

It is now too late to learn anything about the matter from the site itself. So many persons have been digging that it would be impossible to know when the limit is reached between the original excavation--assuming it to have been made--when the bodies were interred, and that resulting from the modern researches. The question of age hinged upon the appearance of the earth in which the bones were found; and the only way in which we can now learn anything about it is to trench across the hill at some of the other burial places, in the hope of finding bones at a similar level, and determining from the conditions in which these are found how they came there.

It is beyond question that any soil, humus, or other discolored matter thrown into any excavation with ordinary soil or subsoil, will be apparent for an indefinite time afterward. But on some of these high points and ridges there is even now not a trace of soil. Frost and wind have worn

bare spots where nothing grows or has grown for a long time. As this region was a prairie devoid of even brush when the whites settled here, it is evident that such slight protection as grass or weeds afford would not be sufficient to hold the earth in place in winter, and when the ground is once swept bare such humble forms of growth may not get a foothold in future.

Any one who has studied surface geology knows these facts.

So at present the whole question of the age of these bones resolves itself into a statement of one party that they were found in undisturbed loess, as reported; and upon the inability of another party to show that there may have been an error of observation or a mistaken interpretation.

There need be no such doubt in regard to the age of the mounds or the lodge-sites. It would not take many centuries for mounds upon these sharp, exposed, ridges to be entirely washed away, in spite of the fact that the fine loess is almost impermeable. Water may not reduce them to an appreciable extent; but frost and wind will wear them away. As to the lodge-sites, their similarity to modern Indian houses is so pronounced that we are fully justified in attributing them to the same degree of culture as that of the Indians of a century ago. The only point of difference is that the later dwellings have not such deep excavations; but the incursions of war-like tribes, or the restlessness that impels a primitive community to be frequently on the move, seems a simpler explanation of the difference than to suppose the two so simi-

lar types to be separated by a great period of time.

Three points must be taken into consideration in fixing a definite age for these remains:--

- 1--. The relics found in and around the lodge-sites, except for the markings on some of the pottery are in no wise different from those picked on the sites of villages which were occupied when Lewis and Clark came through here.
- 2--. Fairly solid bones of animals and occasionally of humans, are found in the bottoms of the Lodge-sites, even where these are damp most of the year. In the pits, where such remains are preserved by ashes, this would not mean much; but where they are found in clayey earth it is evident that "thousands of years" is a meaningless term to apply to them.
- 3--. Persons who claim these "thousands of years" for pretty much everything they find in the ground, must explain why it is that while the bones and implements of these assumed "ancients" are found in such quantities and in such good preservation, those of later Indians should have entirely disappeared.

The only tenable theory of age is the amount of accumulation in the depressions of the lodge-sites. Above the clay which formed the roof, and is next to the floor now, is a depth of material sometimes (it is said) as much as 20 or even 22 inches of mingled silt, decayed vegetation, and soil from the surrounding wall. It is used as an argument of age; that as these sites are on hill tops where there can be no inwash,

this depth must indicate a very remote period for their construction. But a large amount of the earth thrown out into the surrounding ring or wall will find its way back into the depression. The water will stand in them a good part of the year, and the soil remain damp even in prolonged drought: vegetation is thus more luxuriant than on the outside, and its decay will fill up rather rapidly. In addition, much sand blows from the prairies as well as from the bottom lands, and whatever finds its way into the pit will stay there; it will not blow away again as it would in open ground. The weeds, also, will catch and retain much of this dust which would pass on over a dry surface. Consequently the allowance of an inch in a century, which is the most that advocates of great age will allow for accumulation, is much too small.

The topography of the region was essentially the same when these remains were constructed, that it is now. The hills and valleys were as they now exist; the erosion has been very slight as compared with what has taken place since the loess was brought above the water to which it owes its origin. This statement is fully proven by the position of the mounds and lodge-sites. Any estimate of age must be only a guess at the best; but it is a safe guess that no earthwork, mound, Lodge-site, or human bones along this part of the Missouri river have been here as long as ten centuries.