Dental Pathology of Prehistoric Man at the Confluence of the Ohio and Mississippi Rivers

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Material for the investigation here summarized was obtained from Mr. Fain King, who owns the Ancient Buried City in Kentucky, from the Thomas Beckwith collection in southeast Missouri, and from the writer's own collection from southern Illinois.

The burials found in southeast Missouri and in west Kentucky are very similar in that they generally occur in small conical mounds. However, the writer knows of a large village site covering approximately fifteen acres with burials scattered throughout the entire site, buried with the usual camp debris.

In southern Illinois, we have what is known as the slab-burial or stone graves. The grave is usually lined on all sides with limestone or flint slabs standing edgewise against each other. One large slab or several small ones may be used as a covering. It is not at all unusual to find the side or end of one grave forming a side or end of another. We find no special arrangement as to the direction in which they are buried. Very few artifacts are found with these burials.

We know that geographical and cultural environment play an important part upon the lives of the human race. Naturally then, the mode of living, the preparation of the food and the kind of food would, we believe, have a decided influence upon the health of the people. The particular kind of food as well as its preparation would have affected the organs of mastication then, as it does today.

The investigation was done as thoroughly and as accurately as possible. Not all specimens examined were in a good state of preservation, and due to this fact it was necessary to examine all available material. At times we had only a maxilla or a portion of a mandible containing only a few teeth. Some of the teeth examined were found loose with the burial without any osseous structure, so instead of recording the result of the examination according to an individual mouth, it is recorded regarding each individual tooth with or without the osseous structure.

This report gives the result of the investigation on individuals with fully matured mouths. Attrition is classified into four degrees;

(1) Enamel beginning to wear.
(2) Exposure of the dentine at any point.
(3) Cusps of the teeth worn away.
(4) Attrition approaching or exposing the pulp.

The teeth were also examined for caries, but the number of carious teeth only is noted, although in the examination, the location was also recorded, and the majority of cavities were found to be occlusial or mesial or distal occlusial.

	No. of teeth
Showing 1st. degree attrition	1,028
Showing 2nd. degree attrition	2,168
Showing 3rd. degree attrition	1,525
Showing 4th. degree attrition	690
Showing caries	421
Showing alveolar abscesses	71
Total examined	5,390

It is noted in the examination of the skulls that the maxilla and mandibles are large and well formed with the articulation of the teeth unusually good. We find broad well-shaped arches, seldom finding a narrow contracting one. The teeth are large, although not exceptionally so, are well formed with strong roots and thick enamel. Caries is present, especially in specimens showing third and fourth degree attrition. Occasionally one or more teeth may be found in malocclusion, which is usually linguo or bucco-version. Impactions, especially of the lower third molars are occasionally noted, also evidence of alveolar abscesses and periodontiaclasia, although the latter is rather difficult to diagnose with any degree of accuracy, due to the destruction of the osseous structures supporting the teeth. Evidence of osteomyelitis is seen occasionally.

Prehistoric man at the confluence of the Ohio and Mississippi rivers subsisted on both animal and vegetable foods, as well as on grain and nuts. Agriculture was carried on, corn being a very important food. The coarseness of the foods and the amount of grit in them, due to the preparation in stone mortors, were attributing factors to a large percentage of the teeth being found in third and fourth degree attrition. This was responsible also for a large amount of the carious teeth and for the greater percentage of alveolar abscesses. Third degree attrition was the rule in the vast majority of individuals who had reached middle age. Ante-mortem loss of teeth is noted in many instances, as well as a few edentulous cases. The result of foecal infection is manifested in some of the joints and in the vertebrae.

This single study is too incomplete to be conclusive or to be of any great value, however, it is believed that, if it were possible to make a similar survey of the skeletal material throughout the United States, and these accumulated data carefully recorded and studied, it would be beneficial and interesting to archaeologists and anthropologists.