

THE PALÆOLITHIC PERIOD IN THE DISTRICT OF COLUMBIA.*

BY

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(With Plates xvii-xxi.)

During the thousands of years covered by the historic period the world has remained in ignorance of the prehistoric races of man which occupied the territory now belonging to our civilization. Although prehistoric implements and monuments were widely disseminated, and to be seen on every hand, yet they remained unrecognized.

In the first decade of the nineteenth century the Danish savants, in their study of the Runic characters belonging to the early history of their country, discovered evidences of a human occupation earlier than any previously known. Their investigations developed facts which were accepted by the world at large, and the prehistoric ages of man were soon classified as the ages of stone, bronze, and iron. The Stone Age was afterwards subdivided into the palæolithic or ancient and neolithic or recent periods. In the United States the Iron Age belongs entirely to history, and the Bronze Age, as such, had no existence. Our American Indian when found by the European was in the neolithic stage.

The question to be briefly considered here† is the existence of the palæolithic period of the Stone Age in the District of Columbia.

It is not every chipped stone that belongs to the palæolithic period. The implements of this period are of a particular type and have individuality of form, so that the expert can distinguish them from implements of subsequent epochs or periods even when of similar material and mode of manufacture.

The question under discussion is one of great importance, for it involves the existence of a people quite unknown, and their occupation of our country at a period in antiquity hitherto unsuspected. I grant that evidence of this period in Europe does not prove a like period in America. The problem in each continent must be worked out from

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† This paper is an abstract of an article on "the Palæolithic Period in the District of Columbia," not yet published.

independent evidence. No mere theory governing this conclusion in Europe should govern in America; but if the evidence that has proved the proposition in Europe is found in America, then it should be entitled to the same weight.

It is a fact, important in this discussion, that in those European countries most occupied by palæolithic man implements kindred to those found in the river gravels and belonging to the same epoch have been found *on the surface* associated with objects of subsequent periods.

In investigating evidence of the existence of a palæolithic period in America the first question is—admitting, as we must, the existence of such a period in Europe—do we know any reason why it might not have existed in America? I can see no reason. If similar implements are found in America and in Europe, if they are found in similar positions and under similar conditions, I know of no reason why they should not establish, or at least point to, the same conclusion in America as in Europe.

In America, as in Europe, our only knowledge concerning the palæolithic period is necessarily derived from the implements themselves and from their position and surroundings when found. We have neither oral nor written evidence, nor have we tradition, concerning the implements or the people who made and used them. They belong to a period of geologic time which our most definite knowledge in America connects, as at Trenton, with the second glacial epoch.

Palæolithic implements have been found in the United States which correspond in every particular with those of Western Europe—correspond in form, appearance, material, mode of manufacture; in short, they are the same implements in every essential. They have been found under substantially the same conditions—sometimes on the surface, sometimes deep in the river gravels. We have heard from Mr. McGee how these implements were embedded in the river gravels at Trenton, and his opinion is that their antiquity dates to the glacial epoch.* Little Falls, Minnesota; Jackson county, Indiana; Claymont, Delaware; Loveland, Ohio, and other localities tell the same story and furnish the same evidence.

These finds of proved antiquity are in great numbers, and they demonstrate both the existence and the antiquity of a palæolithic period in America. This can not longer be doubted. It is the conclusion of all the scientists who have studied the question. I have mentioned Professor McGee. It goes without saying that Dr. Abbott believes it. Professor Putnam was one of its earliest believers. Professors Wright and Haynes have given it their adhesion, and so have all the geologists who have examined the localities where the implements have been found. Professor Haynes, of Boston, prepared Chapter VI, entitled "The Prehistoric Archæology of North America," and just published in the Narrative and Critical History of America, page 329. He, with Pro-

* See also his article in Popular Science Monthly, xxxiv, 1888.



PALÆOLITHIC IMPLEMENTS FROM THE DISTRICT OF COLUMBIA.
(Half natural size.)

fessor Putnam, recognized the great importance of the finds of these palæolithic implements by Dr. Hilborne T. Cresson at a depth of several feet in the undisturbed ancient gravel terrace of the Delaware River, near Claymont, Newcastle county, Delaware. The artificial origin of these implements appears upon inspection. They repeat (Plates XVIII, XXI) the punch marks (fig. e, Plate XX) the hammer strokes, the conchoidal fracture, all of which combine to shape them for a general purpose and to show conclusively that they are the work of man. It is the repetition of these items of testimony in hundreds and even thousands of specimens that makes the evidence so convincing.

Mr. McGee, in his article on "Palæolithic Man in America," in Popular Science Monthly, XXXIV, 1888, speaking of the Trenton implements, gives his opinion thus: "When examined collectively the correspondence in form and mode of manufacture between symmetric 'turtle-backs,' 'failures,' 'spawls,' 'chips,' and miscellaneous fragments compels the cautious geologist to question whether *any are demonstrably or even probably natural*; the series is not from the certainly natural to the doubtfully artificial, but from the *certainly artificial to the doubtfully natural*." (The italics are my own.)

Implements similar to those referred to have been found by thousands in the District of Columbia, as well as all over the United States, and I have ventured to call them palæolithic. True, they have been found principally upon the surface or in the alluvium which is its equivalent. They are not presented as furnishing complete proof of the *antiquity* of the palæolithic period, but they have been found *in situ*. They are part of the *res gestæ*, and must be accepted as evidence in the case tending, at least, to establish the *existence* of a palæolithic period in the District of Columbia.

That the implements found in the District of Columbia and the Potomac Valley, illustrated in Plates XVII to XXI were of human manufacture, and that they belong to the palæolithic period, can be demonstrated by comparing them, first, with one another; second, with like implements found in the river gravels in the United States; third, with like implements found in other countries, both in the gravels and on the surface.

The details of this comparison would extend to—

Form and appearance; material; mode of fabrication; use and purpose.

In contrast to the similarity of palæolithic implements will be found an equally marked dissimilarity of implements belonging to the neolithic period, whether of Europe or of America, extending to details of appearance, mode of fabrication, material, and purpose. The wider the geographic range of this comparison and the more minute its details, the more conclusive it becomes. For instance, if, instead of confining our comparison to palæolithic implements from the District of Columbia, we include those from all over the United States; and if, instead of com-

paring them with like implements from England and France, we extend our comparison to those from Africa and India, we find them all alike, and consequently all are true palæolithic implements.

Palæolithic implements from the District of Columbia, indeed from all over the United States, are always chipped, never polished; are almond-shaped, oval, or sometimes approaching a circle; the cutting edge is at or towards the smaller end, and not, as during the neolithic period, towards the broad end. They are frequently made of pebbles, the original surface being sometimes left unworked in places (see *b* and *c*, Plate XXI), sometimes at the butt for a grip, sometimes on the flat or bottom side, and sometimes, in cases of these pebbles, on both sides. The differences between the natural and artificial portions are readily distinguishable.

These implements are exceedingly thick compared with their width, so much so as to make it apparent that they were never intended to have a shaft or handle after the fashion of either the axe or the arrow or spear head. This statement does not apply solely to the larger implements, weighing several pounds; for there are small ones of varying sizes, perfect in themselves, with an evidently intentional protuberance which renders hafting impracticable.

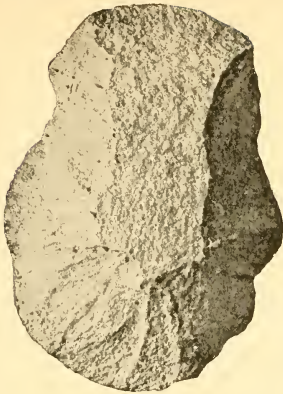
The above-noted features bring into greater prominence the important fact that the implements are all of a common type. They are all alike, and yet not alike. They are not copies, yet there is no mistaking their likeness to each other. When this likeness is found to extend to thousands of implements, coming from every part of the United States, it produces in the mind of the examiner a conviction impossible to escape.

The palæolithic implements found in the District of Columbia compare favorably with those collected by Dr. Abbott at Trenton, and they are equally if not more like the Chelleen implements found in Europe and Asia.

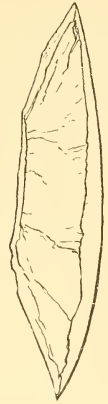
The greater portion of palæolithic implements from Europe are of flint. Flint is scarce in the United States, and we have but few flint implements in any prehistoric epoch. We have, however, some of these flint palæoliths from Texas and more from Utah and New Mexico, and I invite a comparison of them with the Chelleen implements of flint from western Europe.

The palæolithic implements of the United States were mostly made of quartzite. I invite a comparison of specimens of the same material from the Bois-du-Rocher, from Toulouse, from the caverns of Creswell Crags, Derbyshire, England, and those from the laterite near Madras, in India.

The culture of the neolithic period spread over the world, and the implements are well defined and known to all archæologists. The American Indian belonged to this period of culture, and the majority of his implements are similar to those in other parts of the world. Their dissimilarity from the palæolithic implements now under consideration



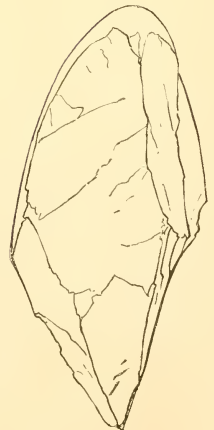
a



b



c



is evident on first inspection and becomes more apparent the closer the scrutiny.

They differ in form and thickness; are differently manufactured; are made of different material, and have a different appearance. The cutting end of the implement is reversed, being at the broad end.

The distinct type of implement called palæoliths is not known to have been used by the American Indian. The palæoliths are not Indian axes, nor hatchets, nor scrapers, nor knives, nor spear or arrow heads. Of the thousands of Indian mounds, cemeteries, graves, or monuments of whatever kind which have been explored, not one has ever yielded these palæolithic implements. In circular No. 36 from my office I propounded the question whether palæolithic implements were found in mounds, tombs, or other ancient structures, or associated with other ancient implements. In the hundreds of responses received from every part of the United States there is no affirmative answer. They may have been found associated with other implements on the surface, but in Indian mounds or graves never.

Whether the particular piece chosen by the prehistoric workmen for the manufacture of these implements was a rounded and smoothed pebble or a rough block, his mode of procedure appears to have been the same. He struck off the flakes by blows, probably with a hammer stone. The fracture left a conchoid of percussion, locating the point of blow with certainty. In many of the larger and ruder implements it would appear as if the work was begun and the heavier flakes knocked off by the aid of a punch, probably a stone punch, of which the marks are at times visible, and by means of which the stroke could be confined to a single spot (Fig. 2, Plate xx). In many cases the smaller flakes have been struck from one side and then from the other until the implement was brought to an edge. Not infrequently the edge shows evidences of use, sometimes being battered rough and at other times being worn smooth. None of them are polished, as were the implements of the neolithic period.

Palæolithic man, whether of Europe or of New Jersey, employed for his implements material which possessed certain qualifications. It was necessary that it should be hard, that it might not break or crumble; tough, that it might hold an edge; homogeneous, or at least approximately, so that it might be flaked in any direction; and it was usually of such substance as to break with a conchoidal fracture.

The materials of the implements found in the District of Columbia and throughout the United States possess in a surprising manner the above requirements. They are usually quartz, quartzite, and argillite, and for the most part were pebbles, frequently water-worn.

On the other hand, the North American Indian and his prehistoric ancestors of the neolithic period used all sorts of eruptive rocks for his implements. He made many also out of clay, rocks, slate, shale, and the like, any material serving him which would grind to a smooth sur-

face and make a clean edge, whether capable of being chipped or not. He also used largely the peculiar material chert, which closely approaches the European flint, and, like that rock, may be shaped by a distinctive mode of chipping quite different from that exhibited by the palæoliths.

The line of demarcation can be plainly drawn between the two classes of implements.

It is my opinion that the palæolithic implements of the United States correspond in use and purpose, as they do in their other qualities, with the Chelleen implement of France, which was the representative implement of that period.

These comparisons might be continued indefinitely, and the more thorough the comparison the greater will appear their similarity to other palæolithic implements and their dissimilarity to neolithic implements.

When I compare implements found by the thousand on the hills and in the valleys around the city of Washington with those, also found by the thousand, distributed over the United States from the Atlantic to the Pacific, and find them to be substantially the same implement; when I compare those from America with the equally great number from Europe and the Eastern hemisphere, and find them all substantially the same implement; and when again, comparing them with the implements of the neolithic period, whether European or American, I find them to be unlike except in a few and insignificant details—when I review all these facts I am forced to the conclusion that the implements I exhibit from the District of Columbia are of the same palæolithic type as those found in the gravels at Trenton and elsewhere, and that they tend to prove the existence of a palæolithic period in the United States.