

locality such as this; where the river has again brought to light rude implements that characterise an almost primitive people? But, assuming that the various implements fashioned by a strictly pre-glacial people have been totally destroyed by the crushing forces of the glacier, and that the specimens now produced were not brought from a distance, may they not be referred to an early race that, driven southward by the encroaching ice, dwelt at the foot of the glacier, and during their sojourn here these implements were lost?*

The opinions thus set forth in the first published account of Dr. Abbott's discoveries, have since been considerably modified, in so far as the geological age of the tool-bearing gravel of the Delaware valley is concerned. In his earlier publications, he assumed as no longer questionable, the existence of inter-glacial, if not pre-glacial, man on this continent. In his more matured views, as set forth in his "Primitive Industry," he speaks of "having been seriously misled by the various geological reports that purport to give, in proper sequence, the respective ages of the several strata of clay, gravel, boulders, and sand, through which the river has finally worn its channel to the ocean level;"† so that he has probably ascribed too great an antiquity to the peculiar class of stone implements brought to light in the river-gravels of New Jersey. Dr. Abbott, accordingly, now states as his more matured conclusion, confirmed by the reports of some of the most experienced geological observers, on whose judgment he relies, that the Trenton gravel, in which alone the turtle-back cells have thus far been found, is a post-glacial river deposit, made at a time when the river was larger than at present; and is the most recent of all the formations of the Delaware.‡ Here, however, the term "recent" is employed altogether relatively; and although Dr. Abbott no longer claims in the discovery of the stone implements of the gravel beds near Trenton, New Jersey, evidence of the existence of man on the American continent before the close of the Glacial period, he still refers the Trenton gravel tool-makers to an era which, at the lowest computation precedes by thousands of years the earliest historical glimpses of Assyria, Egypt, or wherever among the most ancient nations of the old world the beginnings of history can be traced.

The disclosures of Dr. Abbott claim a special importance among the fruits of archaeological research on this continent from the fact that they furnish the first well-authenticated results of systematic research based on the scientific analogies of European archaeology. For it is well for us to bear in remembrance that the evidences of the antiquity of man in Europe do not rest on any number of chance disclosures. It is a simple procedure to dig into a Celtic or Saxon barrow, and find there the implements and pottery of its builders. But archaeologists have learned to recognize the paleolithic implements as not less characteristic of certain post-pliocene deposits than the paleontology of the same geological formation. The river-drift and cave deposits are characterized by traces of contemporaneous life, as shown in the examples of primitive art from which they receive the name of the tool-bearing drift or gravel; just as older geological formations have their characteristic animal, and vegetable fossils. The specific character of the tool-bearing gravel of the French drift having been determined, geologists and archaeologists have sought for flint implements in corresponding English strata, as they would seek for the fossils of the same

* Report of the Peabody Museum, Vol. II, p. 38.

† Primitive Industry, p. 471.

‡ Ibid, p. 542.

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† Ibid, p.

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