

Palæolithic Man at Creswell.

BY THE REV. J. MAGENS MELLO, M.A., F.G.S., ETC.



OME forty years or so ago, the possibility of man having been a contemporary of the mammalian fauna of the Pleistocene period was, if not openly derided, yet received with great scepticism, even in the scientific world. The discoveries made in the earlier part of the century in the caves of Gailenreuth, Oreston, Kirkdale, Paviland, Kent's-hole and Engis; the startling announcement made by Boucher de Perthes of the presence of flint implements in the ancient gravels of the Somme, had at first but little convincing power over long-established prejudice; but as discovery succeeded discovery, and first one locality, then another yielded up its evidence, the combined testimony became at last so strong that it was impossible for any but the most obstinately opinionated to refuse their belief, and at length the existence of Pleistocene man has become an universally acknowledged fact.

The presence of human remains, if not of his bones, yet of intelligently contrived implements in British and foreign caves in such intimate association with the teeth and bones of the Mammoth, woolly Rhinoceros, Cave Bear, Hyæna, Reindeer, and other animals, under circumstances precluding the possibility of subsequent admixture, allowed of no other explanation than that of contemporaneity.

In England the long and carefully-conducted exploration of Kent's hole, that of Wokey hole, and other caverns, showed that in the Pleistocene age a race, if not races of man, was in existence, savage indeed, but yet not without some appliances of art,

and able to hold his ground against the savage beasts that surrounded him on every side, and amidst vicissitudes of climate to which we are now strangers. Further discoveries led to the knowledge of the fact that many of the leading characteristics of these primitive men, their habits, manner of living, their progress in civilization, the successive appearance of tribes, and in some cases even their physical conformation, can be arrived at.

M. Broca, in his address to the French Association in 1877, showed how, on the Continent at any rate, there has been sufficient evidence to satisfy him and other foreign geologists, proving the existence of at least three races of men who succeeded one another in Europe, before the dawn of history. I must however state, before giving an outline of this evidence, that it is not altogether accepted in this country, and at present the conclusions derived from the discoveries in certain foreign caves, of human bones associated with the Pleistocene fauna, must be received with very considerable doubt. According to M. Broca's account, in his address last year, there seems to have been first a strongly-marked dolicho-cephalic or long-headed race, which has been called that of Canstadt, the locality where certain bones of man were found in conjunction with implements of a very rude type; the nearest approach to this race of man, as far as physical conformation goes, is to be found amongst the Esquimaux and the natives of Australia. But a few fragmentary skulls and bones were found in the Canstadt cave, but these men may be looked upon as the makers and users of the rudest implements of the river gravels and of the caverns, and the contemporaries of the extinct Mammalia; they were replaced by another race more advanced in several respects, although also a long-headed one, but of a higher type, according to M. Broca, and of taller stature, a race also which showed signs of a more advanced civilization; it has been named after the cave of Cromagnon, in which some human skeletons were found side by side with Pleistocene remains; but whether these skeletons were really of the same date as those remains of the Pleistocene age, must be open to question; and Professor Boyd Dawkins has shown good reason why we should suspend our judgment as to the evidence of Cromagnon, but

should it be possible to establish this race, it is to it that we must assign the more perfectly fashioned implements of the later Palæolithic age; they also made use of bone for various purposes, sometimes ornamenting their bone tools with considerable skill; the engravings on bone found in some of the caves of the Vezère—the Madeleine amongst others—and in Belgium and elsewhere, may be attributed to these men; they were contemporaries, as were their predecessors, of the Pleistocene animals, and seem at any rate for the most part to have disappeared with them. A very short race is said to have followed the men of Cromagnon, named after the caverns of Furfooz in Belgium: their civilization seems to have been of a lower character, although they possessed the art of making pottery. The Reindeer and the Glutton appear to have been still existing, their bones having been found with those of these men.

The evidence of there having been successive periods in the history of Palæolithic man has been pointed out by M. de Mortillet, who has shown that whereas the remains of his workmanship in some caves, such for instance as that of Moustier, are of an extremely rude type, approaching closely in character to that of the implements of the river gravels, in others, of which Solutré is given as a type, the implements are marked by a higher finish and greater differentiation.

The only continental cave that has shown, as far as I am aware, an actual succession of deposits exhibiting the traces of a chronological advance in art distinctly marked, is the Grotte de l'Eglise at Excideuil, a cave in the limestone of the Great Oolite, on the banks of the Loüe in Dordogne. M. Parrot, who explored this interesting cavern, has been kind enough to send me the report of his discoveries there, and from this it appears that at varying depths in the floor were found associated remains of the Pleistocene fauna with the implements of man. In the lowest bed, in conjunction with bones of the Reindeer, Cave Bear, and Bison (the first of the animals being only found feebly represented in the uppermost parts of this

deposit), were found implements of jasper of the rudest type, massive tools, and irregularly-made scrapers, somewhat recalling those of Moustier in character. The lowest deposits of the cave were covered by a dark cave-earth under a stalagmitic layer of some thickness; this cave-earth contained, with numerous bones of the Reindeer and Bison, a large number of implements; amongst these were flakes of jasper, together with some beautifully-formed lance or arrow-heads, these latter being of a type even more perfect than that of Solutré, and also a few implements of bone. We see thus in this cave two very distinct epochs of human civilization, but there is a great gap between the rude forms of the earliest deposits and the highly differentiated ones of the dark cave-earth; this gap, which is not bridged over in the Excideuil cave, seems to be in part filled up by other explorations, made by M. Parrot on the banks of the Vezère, in the caves of La Baloutie, and also in the neighbourhood of S. Léon and La Rochette, where, besides implements of the Moustier type, numerous scrapers of various forms made of flint, and arrow-heads, chipped on one surface only, were found, together with remains of the Reindeer and Bison. These discoveries seemed to denote a period in art intermediate between that of Moustier, S. Acheul, and that of Solutré, and to show a clear passage upwards to the more perfect forms of Solutré, Laugerie-Basse, and Excideuil. That such a succession of periods in the advance of civilization amongst the Pleistocene men really existed, has been placed beyond question by the exploration of the Creswell caves, and setting aside the more or less doubtful deductions drawn by M. Broca from the discoveries of bones of man in Pleistocene deposits, there can be no question that there were succeeding races exhibiting a progressive civilization during the Pleistocene age.

To a certain extent the discoveries in Kent's-hole have pointed in this direction, the implements found in the older breccia are manifestly of a ruder type than those obtained from the more recent cave-earth; in form they assimilate to those from the river deposits, whilst the implements from the cave-earth are

more highly finished, some of them being of the well-known lanceolate type of Solutré, and with these some carefully-made bone weapons occurred. Nowhere, however, has more distinct evidence been afforded than in the caves of Creswell, some of the chief points of which we will now consider. Three of these caves have been explored: the Pin Hole, the Robin Hood Cave, and the Church Hole. That the floors of these caves contained remains of the Pleistocene age became evident to me in 1875. When I commenced the exploration, a very few strokes of the pick in the Pin Hole and Robin Hood caves revealed the rich nature of the contents of their floors. The researches I then commenced were continued afterwards in conjunction with Mr. Heath and Professor Boyd Dawkins. The results of the exploration have been so fully detailed by Professors G. Busk, Boyd Dawkins, and myself, in the Journal of the Geological Society, and in other papers, that it will suffice here to give a general sketch only of the main features of the discoveries as bearing upon the history of primitive man.

The floors of the Creswell caves were found to consist of several beds of sand and earth, the gradual accumulations of a long series of ages, and the description of the floor of one of the caves at its fullest development will show the nature and mode of occurrence of the successive beds.

SECTION OF THE FLOOR OF THE ROBIN HOOD CAVES.

1. Surface soil—Modern and Roman remains.
2. Stalagmitic breccia, with charcoal, worked flints and bones.
3. Cave earth, flint implements and bones.
4. Mottled cave earth with ditto.
5. Red sand, bones and quartzite implements.
6. Whitish calcareous sand and limestone blocks, forming original floor of cave.

Forming a total thickness of 8 or 9 feet, where all the beds were present at their maximum development.

In the Pin Hole the upper beds were wanting, with the exception of a thin layer of surface soil, and the floor consisted of the red sand only, resting on the above-mentioned calcareous bed, and in this cave traces of man's presence were almost

absent, one implement only having been found—a flint scraper near the surface; but the animal remains were very numerous and varied, differing only from those of the other caves in the presence of the Arctic Fox and the Glutton, the bones of which were recognised by Professor Busk; the former of these animals had not been previously met with in Britain, although its remains were abundant in some of the continental caves. The Pin Hole also contained bones of the Urus, which was not found in either of the others. The total number of the Pleistocene species found in the Creswell caves was 21, these are shown in the accompanying list, which does not, however, represent the entire number of animals living in the district during the period; we must add to it at any rate the Lynx and the Hippopotamus, one of which, the Lynx, has been met with in the neighbourhood, and the other not very far distant.

PLEISTOCENE FAUNA OF THE CRESWELL CAVES.

- 1 Man.
- 2 *Machairodus latidens*.
- 3 *Felis Spelæa* (Lion).
- 4 *Felis Catus* (Wild Cat).
- 5 *Felis Pardus* (Leopard).
- 6 *Mustela Putorius* (Polecat).
- 7 *Hyæna Spelæa* (Hyena).
- 8 *Canis Vulpes* (Fox).
- 9 *Canis Lagopus* (Arctic Fox).
- 10 *Canis Lupus* (Wolf).
- 11 *Ursus Ferox* (Grizzly Bear).
- 12 *Ursus Arctos* (Brown Bear).
- 13 *Cervus Tarandus* (Reindeer).
- 14 *Cervus Megaceros* (Irish Elk).
- 15 *Bison Priscus* (Bison).
- 16 *Bos Primigenius* (Urus).
- 17 *Equus Caballus* (Horse).
- 18 *Rhinoceros Tichorhinus* (Woolly Rhinoceros).
- 19 *Elephas Primigenius* (Mammoth).
- 20 *Lepus Timidus* (Hare).
- 21 *Arvicola Amphibius* (Water Vole).

Most of these animals appear to have been present during the whole period of the occupation of these caves, as far as revealed

by their floors, from the lowest bed, the red sand, up to the top of the Breccia, in which fragments of the bones and the teeth of the Reindeer, Horse, Hyæna, and Rhinoceros were found, the only observable difference was that the number of the animals seems to have been fewer in the earliest deposits. It has also been pointed out by Professor Dawkins, that the Hyænas were in far greater abundance during the period represented by the accumulation of the cave earth and Breccia, than they were during the time of the deposition of the Red Sand. The animals which appear to have been most numerous in the neighbourhood during the Pleistocene period, were the Hyæna—of which no fewer than 928 bones were found in the Robin Hood Cave alone, the Reindeer, the Rhinoceros, and the Horse. The gnawed condition of a very large proportion of the bones shows that the caves were used by the Hyænas, for dens during the absence of their human inhabitants; the bears and lions, as well as other Carnivora, would doubtless have also occupied them at intervals, and the presence of that formidable animal the *Machairodus*, in Derbyshire and the adjoining counties, appears probable from the presence of one of its teeth, the condition of which is perfectly similar to that of the teeth of the other animals found in the caves. Hitherto, the only traces of this animal in Great Britain have been found in Kent's Hole, but it was abundant in France, where most of its bones, as well as its teeth, have been discovered. With all these animals during nearly the entire period represented by the Creswell Cave deposits, Man was in existence. His weapons and tools have been found in each of the beds already described; and what is of chief importance is, that at Creswell, we have the proof plainly before us of the successive occupation of the caves by men of very different degrees of civilization. The implements found in the Red Sand and at the base of the cave earth, differ in a remarkable manner from those found in the later deposits; they are implements of the rudest possible construction. The pebbles of the neighbourhood appear to have been the only material he made use of, unless wooden or bone implements of the same age have perished. The pebbles

used were mostly the hard quartzites derived from the Bunter Conglomerates; these were sometimes taken without any preparation, and used as hammers or crushers or pot-boilers, others have had a few flakes roughly chipped from them, to enable them to be held more readily. In some cases flakes struck from a large pebble have, by additional chipping, been adapted for use as scrapers, knives, or hatchets; besides the quartzite pebbles, in one or two instances pieces of clay iron ore have been fashioned into tools of the oval or leaf shaped form. The only type of implements to which we can refer these rude Creswell specimens is that of S. Acheul and Moustier, and the men would be a wandering tribe of the race of Canstadt. The next point to be noted is that the implements of the upper cave earth, and of the breccia, show a marked and gradual progress in civilization; the quartzite pebbles appear to have been replaced, although not all at once, by the more tractable flint; we first find rude chips of flint and some flakes mingled with quartzite implements, these latter become more and more scarce, and the flint tools present a greater variety of form, and a superior finish, as we approach the top of the series of beds. Well-made lance heads, chipped on both faces, similar to those so characteristic of Solutré, and Laugerie-Basse were found, also delicately-made borers and scrapers, and together with these we find that awls, needles, arrow heads, and other implements of bone were in use; and lastly, that the artistic perception was not altogether absent. A well and truthfully-executed engraving of the fore-quarters of a horse,* was found in the Robin Hood Cave, in the upper cave earth; this is identical in character with the well-known figure from the Caves of Perigord, and from Kesslerloch; and this, as well as the general character of the implements, affords the clearest proof that the hunters of the Horse and Reindeer of Southern France and Switzerland had found their way along the Great Eastern Valley now covered by the waters of

* "The first trace," as Professor Dawkins has observed, "of pictorial art yet discovered in Great Britain."

the German Ocean, and wandered as far north as the borders of Yorkshire; whether they went beyond this we have as yet no proof, as far as I am aware.

Besides the various implements found in the caves, numerous traces of charcoal occurred in the breccia and in the cave-earth, and some fragments of ruddle were also met with; and it is thus not improbable that the Palæolithic hunter was not altogether insensible to the charms of personal adornment. A piece of amber found in the Robin Hood cave may have been treasured as a charm or curiosity, but is interesting as affording an incidental proof of the migration of these men from the south-east. The principal food of these hunters was probably the flesh of the horse, reindeer, and hare.

The discoveries that have now been detailed show us that the Palæolithic age of man was one of lengthened duration, with clearly marked periods; the earliest, that in which man was a mere savage, in the very lowest state of culture, with such tools only as he could fashion from the nearest pebbles. We next find him making use of flint, and gradually improving in the power of adapting it to varied purposes, whilst bone and other materials were also turned to account. The men who used these more perfectly formed implements must have been in a higher state of civilization than those who had but a broken pebble; and the discoveries in the Creswell caves, where the more finished type of implements has been found above the ruder in undisturbed beds, show that the more civilized man has succeeded and replaced the earlier savage race, or else that this latter, in the course of ages, improved in the arts of tool-making, and learnt, not only to shape the flint more elaborately, but also to make use of bone for domestic and other purposes. Of the yet more highly-civilized men of the Neolithic age, we have no trace at Creswell; a long blank seems to intervene between the occupation of its caves by Palæolithic man and the dawn of history. Passing to the layer of soil above the breccia we are carried at once to as late a period as the 5th or 6th century of our present era. The presence of a few bronze fibulæ, some pottery, a sculptured

bone or two, and some fragments of the human skeleton, show us that at Creswell, as in other parts of Britain, the partly-civilized Brit-Welsh, or Romano-British fugitives, sought a refuge in the caves from the more powerful and warlike tribes, who devastated the country after the withdrawal of the Roman legions; and with these remains of the early Britons, the history of the Creswell caves may be closed for the present.