

*On Human Bones discovered in the Caves of France.*

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THERE have been discovered in the Caverns of Bize, human bones not only in the calcareous concretions, or the osseous breccia fixed to the roof or to the walls of these cavities, but also in the midst of the black mud, which is found the most frequently above the red mud, in which bones equally exist. Along with these bones, have been observed human teeth, marine and land shells of our own epoch, as well as fragments of earthenware. The teeth which we have compared, resemble the first molar, and like those of other animals which are mixed with them, we perceive that they preserve their enamel. But what they have peculiar to them, is, the roots are so much changed as to adhere firmly to the tongue.

Human bones and earthenware fragments were also mixed and confounded in the Caverns of Pondres, with numerous remains of terrestrial mammalia, among which were to be remarked the following animals:—of a rhinoceros; of wild boars; of horses, of a smaller race than the large horses of the Caverns of Lunel-Viel; of two species of *Bos*, one of which was the Aurochs; of a description of sheep; of a single species of *cervus*, of the size of the stag; of a species of bear; of a badger; of the *hyæna spelæa*, a fossil kind which approaches the most of the *spotted hyæna*, or the *hyæna* of the Cape; of rodentia, the size of the hare and rabbit.

These remains of mammalia were accompanied with the same land shells that we found associated in the Caverns of Lunel-Viel.

In the Cavern of Souvignargues were detected several human bones, as of the scapula, humerus, radius, perineum, sacrum, and two vertebræ. It is to be remarked, that under these bones there only exists a depth of twenty centimetres of diluvium, so that they were very close to the rock upon which this mud had been deposited.

This position was one which was too important to leave undetermined, with the view of establishing, if by any circumstance the different beds of gravel had undergone any derangement, but as we were well convinced that there was not any interposition between them, which is even the case with the superior bed containing shells, nor any sort of dislocation, it is difficult to resist the conclusion, that, whether it be the bones, or the different sorts of gravel or mud, they are found

in the position, and in the situation in which they had been originally placed. The human bones of these Caves were compared with the oldest ones which could be collected from Gaulish sarcophagi, some of these having been interred for so long a period as fourteen or fifteen centuries. The result of these experiments was to justify the reference of the human bones found in these Caves to an epoch far remoter than what could be assigned to those which were deposited not long after the christian era. It was not, however, so easy to determine from this test, the comparative age of the ossiferous deposits, when considered exclusively, the greater or less abundance of the animal matter appearing to vary with the circumstances under which they were found imbedded, as for instance, with their greater or less protection from the action of external agents. However, as far as could be inferred, the presumption was, that the ossiferous deposits of the Caverns of Lunel-Viel and of the Hermite, in which no human bones had been detected, were the most ancient.

The fragments of pottery which were submitted to the inspection of the antiquaries of Montpellier, appeared to them to indicate the first infancy of human arts, being pronounced to belong to times anterior to the introduction of Roman inventions into Gaul. For instance, the earth of which they had been composed did not seem to have been washed before being used. The earthen vessels had been dried or hardened by the sun, or by a fire kindled on the occasion, but had not owed their baking to furnaces constructed for the purpose, which was shown by their external surfaces only having undergone the action of heat.

But to conclude,—from the circumstances under which these bones are discovered, M. de Serres has very readily arrived at two natural conclusions;—1st, That since the appearance of man upon the earth, certain species of terrestrial mammalia have been completely destroyed, or at least have ceased to exist in the different parts of the globe which have been explored up to the present time; 2d, That the remains of our species are incontestibly mixed, and are found in the same geological circumstances with certain species of terrestrial mammalia, considered up to the present time as antediluvium.