

too, influenced by many reasons, have expressed my belief in the probability of a very early domestication of the horse, probably in the paleolithic age of Europe.

But this has here no bearing. The essential fact is, and remains, that the horse of Solutré—which may have been the same that was hunted and pictured by the cave-dwellers of Dordogne—was smaller than the steppe horse of Central Europe, and had a withers-height of about 125 cm. if one may judge from the skeleton of a Solutré horse preserved in Lyons. To what is the smallness of this horse due? In giving my conclusions I shall attempt an explanation; here I will remark only that the climatic and physiographic conditions under which the Solutré horse of the paleolithic age lived were probably essentially different from those surrounding the steppe horses of the northern lowlands and coastal lands of Europe.

THE HORSE OF PREHISTORIC (LATER QUATERNARY) TIMES.

(a) *The Neolithic Age.*—Remains of horses of the neolithic age are rare; nevertheless, finds from Wohontsch on the Biela, Leitmeritz, Fouvent, and Louverné are evidence that at least in Bohemia and Gaul the horse had not disappeared in neolithic time.

More complete remains of the horse than merely a few bones of the extremities seem to have been found at Schussenried, of which Fraas* has unfortunately given a very imperfect account, and it was not possible to determine its geologic age. Here belong, however, still other finds: Boucher de Perthes found in 1833 at the bottom of a turbary in the Department of the Somme in France, 5 to 6 meters below the water-level, two skulls of horses associated with late neolithic pottery and with flint implements. These were deposited in the Museum in Paris; and one of the skulls was later examined by Sanson himself and determined as "*Asinus africanus* or the *African ass*."

Sanson remarks concerning it on page 133, t. III, of his "Zootechnie": "En le donnant comme étant celui d'un cheval, Boucher de Perthes s'était donc trompé, erreur bien excusable d'ailleurs, de la part d'un très-habile archéologue tout à fait étranger à l'anatomie zoologique. Ce qu'importe, c'est que la présence de ce crâne dans le nord des Gaules, à l'époque de la pierre polie, atteste que sa race y avait été amenée dès lors par des migrations de population humaine."

Sanson considered this an isolated case, but a no less eminent authority than Ludwig Rüttimeyer described an equid skull from a pile-dwelling at Auvernier on Lake Bièvre, which he ascribed to an ass.†

Since, through the kindness of Professor E. Ray Lancaster and Oldfield Thomas, I was able to compare this African ass, so early an inhabitant of Europe, with its contemporary from the ruins of Abadieh near Kenia in Egypt, dating according to Professor Flinders Petrie from the IV dynasty, I came to doubt the correctness of the determination of the two authorities—Rüttimeyer and Sanson.

Rüttimeyer (p. 53), as well as Sanson, was led to its determination as *Equus asinus*, or the half-ass, on account of the small absolute size of the skull. But the greater extent of the diastema or toothless ridge of the jaws than is usual

*O. Fraas, Beiträge zur Kulturgeschichte, etc. Arch. f. Anthrop., v, 1872.

†Rüttimeyer. Schädel von Esel u. von Rind aus den Pfahlbauten von Auvernier u. Sutz Pfahlbauten. VII. Bericht. Mitt. d. antiq. Gesellsch. Zürich, Bd. XIX, pp. 50-56, 1876.