

ART. XXXVIII.—*Notice of a new and diminutive species of fossil Horse (Equus parvulus), from the Tertiary of Nebraska; by Prof. O. C. MARSH, of Yale College.*

IN a small collection of fossil vertebrate remains, obtained by the writer during the past summer in the Tertiary deposits of Nebraska, there are several specimens of no little interest, as they indicate a new species of fossil horse, very much smaller than any hitherto known. These remains were collected at Antelope station on the Union Pacific Railroad, about 450 miles west of Omaha, where a few weeks before, during the excavation of a well, they had been thrown out from a depth of sixty-eight feet. This locality has since attained considerable notoriety, from the fact that the remains then found were pronounced to be human by those who first examined them, and various accounts of the discovery have been published in the newspapers. This, in fact, induced the writer, when in the vicinity, to examine the locality and its fossils, an account of which he has already given elsewhere.*

* National Academy of Sciences. Northampton Meeting, Aug. 1868.

The equine remains now to be noticed consist mainly of bones of the limbs, and among them is a hoof-phalanx, a coronary or second phalanx, parts of the first phalanx and metacarpals, as well as some of the smaller carpal and tarsal bones, and fragments, apparently from other parts of the skeleton. All are in an excellent state of preservation, and part of them are so characteristic that they clearly indicate the near affinities of the animal to which they belonged.

The ungual or hoof-phalanx differs in form from that of the recent horse only in being somewhat more depressed, and in having the sides of the upper surface slightly less convex transversely, and the beak of the articular face a little less pointed. Its length measured along the axis is very nearly one inch, the shorter diameter of the articular face is five lines, and the longer, or transverse, ten lines. The coronary, or middle phalanx, is proportionally more elongated than in the living species, and its proximal end rather more triangular. Its length along the axis in front is nine lines, the width of the articular face of the proximal end ten lines, and that of the distal end nine lines. The dimensions of all, or nearly all, of the remaining bones render it very probable that they belonged to the same individual, or at least to one of similar size, and specifically identical. They indicate an equine animal scarcely more than two feet, or possibly two and one-half feet in height, although full grown, as the ossification of the various bones clearly proves. Additional parts of the skeleton, especially the teeth, would perhaps show generic characters different from those of the living horse, but in the absence of these, as the remains are evidently distinct from any hitherto described, the species may be named *Equus parvulus*. This makes seventeen species of fossil horses now known to have lived in North America, although until quite recently it was very generally believed that there was none indigenous to the continent.

The bones above described occur in a stratum of gray arenaceous clay, lying nearly horizontally, and apparently of later Tertiary age. The large number of vertebrate remains found together in the space of a few feet indicates a remarkable locality, which unfortunately cannot again be reached except by deep excavation; and hence it is greatly to be regretted that so many of the specimens should have been lost to science by being carried away as human relics. Among those secured by the writer, in addition to the equine fossils, were the remains of several species of ruminants, a phalanx of a carnivorous animal about the size of a lynx, and fragments of a land turtle resembling somewhat the *Testudo neobrarensis* Leidy, all of which will be more fully described in this Journal at an early day.

Yale College, Oct. 5th, 1868.