

bones are no where discovered in the regular tertiary strata. The country that could give support to the mammoth, or ancient elephant, to the mastodon, and the elk, might, for aught we know to the contrary, be also suited for the residence of man.

It is very different with respect to the secondary strata ; for though many of these strata have once been dry land, or in the vicinity of dry land, yet we no where find in them the bones of herbivorous mammalian quadrupeds, that could have been with men joint tenants of the globe ; nor even do we find bones of carnivorous quadrupeds that might have preyed upon the former, had they existed.

During the tertiary epoch, however, there is evidence of great revolutions of the surface, by the elevation of mountain ranges, which might, perhaps, render the earth unfit, for the continued existence of the human species ; and I am inclined to believe, that the occurrence of human bones in caverns, or in diluvial beds of gravel, sand or mud, has not yet invalidated the position, that the creation of man was posterior to the tertiary epoch.

We come now to the English caverns : they have been more recently the object of attention than the bone caverns of Germany ; but their discovery may be said to have given a new impulse to geology, both in this country and on the Continent, for which we are indebted chiefly to the enlightened and indefatigable exertions of Professor Buckland of Oxford.

Single skeletons of large quadrupeds have formerly been discovered in caverns in this country ; but we had no authentic account of the bones of carnivorous animals having been found in any English caves, previously to the year 1821 ; when some labourers, working in a quarry at Kirkdale, near Kirby Moorside, in Yorkshire, discovered an opening covered over with rubbish and earth, about one hundred feet above the neighbouring brook. This was the mouth of a low cavern extending about two hundred feet into the rock. The floor of the cavern was covered with broken bones and teeth of various animals, encased in a stratum of mud about a foot thick. Fortunately this cavern was examined by Professor Buckland, of Oxford, soon after its discovery, who has published a very luminous account of its structure and contents, elucidated by references to the most remarkable caverns in other countries which he has visited, containing the bones of carnivorous animals. The bones in the Kirkdale Cave are broken and gnawed, and some of them preserve the marks of the teeth which have fractured them. Even the excrements of animals, similar to those of the hyena, have been discovered with them. The bones in this cave differ much from those in the caves of Germany, as a great number of them belong to herbivorous animals, and the carnivorous animals whose remains are most abundant are hyenas.

Among these remains, Professor Buckland has ascertained bones of the following orders :—

*Carnivorous Quadrupeds.*—The hyena, tiger, bear, wolf, fox and weasel.