

fluctuations are afforded by gravel containing elephant's bones at slight elevations above the Meuse and several of its tributaries. The loess also, in the suburbs and neighbourhood of Liége, occurring at various heights in patches lying at between 20 and 200 feet above the river, cannot be explained without supposing the filling up and re-excavation of the valleys at a period posterior to the washing in of the animal remains into most of the old caverns. It may be objected that, according to the present rate of change, no lapse of ages would suffice to bring about such revolutions in physical geography as we are here contemplating. This may be true. It is more than probable that the rate of change was once far more active than it is now in the basin of the Meuse. Some of the nearest volcanoes, namely, those of the Lower Eifel about sixty miles to the eastward, seem to have been in eruption in post-pliocene times, and may perhaps have been connected and coeval with repeated risings or sinkings of the land in the Liége district. It might be said, with equal truth, that according to the present course of events, no series of ages would suffice to reproduce such an assemblage of cones and craters as those of the Eifel (near Andernach for example); and yet some of them may be of sufficiently modern date to belong to the era when Man was contemporary with the mammoth and rhinoceros in the basin of the Meuse.

But, although we may be unable to estimate the minimum of time required for the changes in physical geography above alluded to, we cannot fail to perceive that the duration of the period must have been very protracted, and that other ages of comparative inaction may have followed, separating the post-pliocene from the historical periods, and constituting an interval no less indefinite in its duration.