

and boulders upon those poles, a counterpart of the boulder clay which overlies the forest-bed on the Norfolk cliffs.

We have seen that all the plants and shells, marine and freshwater, of the forest bed, and associated fluviomarine strata of Norfolk, are specifically identical with those of the living European flora and fauna; so that if upon such a stratum a deposit of the present period, whether freshwater or marine, should be thrown down, it might lie conformably over it, and contain the same invertebrate fauna and flora. The strata so superimposed would, in ordinary geological language, be called contemporaneous, not only as belonging to the same epoch, but as appertaining strictly to the same subdivision of one and the same epoch; although they would in fact have been separated by an interval of several hundred thousand years.

If, in the lower of the two formations, some of the mammalia of the genera elephant and rhinoceros were found to be distinct in species from those of the same genera in the upper or 'recent' stratum, it might appear as though there had been a sudden coming in of new forms, and a sudden dying out of old ones; for there would not have been time in the interval for any perceptible change in the invertebrate fauna, by which alone we usually measure the lapse of time in the older formations.

When we are contrasting the vertebrate contents of two sets of superimposed strata of the cretaceous, oolitic, or any other ancient formation in which the shells are identical in species, we ought never to lose sight of the possibility of their having been separated by such intervals or by two or three thousand centuries. That number of years may sometimes be of small moment in reference to the rate of fluctuation of species in the lower animals, but very important when the succession of forms in the highest classes of vertebrata is concerned.