

thought that it might be possible to decide as to the relative antiquity of species. Nature was then, as it seemed to him, in her first vigour, and fashioned larger types of life than now survive. When the earliest condensation of water took place upon the still warm surface of the globe, great corrosion of that surface was effected. The decomposed rocks gave rise to much clay, which was washed off into the sea, there to form the various argillaceous sediments now to be seen on the land. As life increased in the sea, the calcareous fossiliferous formations were deposited which constitute so much of the existing land. Buffon supposed that the sea in which all the fossiliferous strata were accumulated must have covered the land for at least 20,000 years. The parts of the earth's surface that rise into land were now covered with dense forests.

The Fourth Epoch witnessed the emergence of the lower part of the land, owing to the sinking of the waters through cracks into cavities in the interior of the globe. Buffon estimated that 20,000 years were required for the lowering of the sea from its original to its present level. Profoundly as he had meditated on the structure of the earth, he had during thirty years made no advance in his views of the origin of the dry land, nor had he obtained any more light on volcanic phenomena than his predecessors had possessed. He estimated that a hundredth or a two-hundredth part of the surface of the earth was covered with dense vegetation, and that vast quantities of this vegetation were swept down into the lower places of the earth's surface and into the fissures of the rocks. He supposed that meeting there with the substances