

To the second epoch (*circa* 35,000 years) Buffon assigns the gradual consolidation of the material at the earth's surface. The occurrence of rents in this primitive crust allowed the influx of molten metallic ores, and was the first cause of surface irregularities. At the commencement of the third epoch (*ca.* 15-20,000 years), the cooling of the earth proceeded so far that the atmospheric vapours were precipitated and gave origin to the primitive universal ocean. Then began the development of life in the warm waters and the accumulation of marine sediments. Gradually the mountains and continents appeared, the tapering of the continents towards the south being due to the rush of oceanic currents from south to north. The fourth period (*ca.* 5000 years) was signalled by a sudden accession of the earth's internal heat, with the result that violent volcanic eruptions burst forth, and were accompanied by gigantic convulsions of the earth's crust.

The fifth period saw calm restored, but the equatorial regions were still so hot as to be uninhabitable. Life flourished over large continental regions at the Poles, and the large terrestrial animals, elephants, mastodons, the rhinoceros, and others, came into existence. As the heat continued to diminish, the faunas and floras gradually migrated southward.

The sixth period saw the decimation of a continuous northern continent into several portions, and many local changes in the extent and position of the seas. Man appeared and began to struggle with lower creation for the means of existence.

The seventh period is the epoch of Man's lordship in the world, and this will continue until the earth cools to a temperature twenty-five times colder than that of the present age, when all Creation on the Earth's surface will be annihilated.

Buffon's merit consists in the bold construction and masterly exposition of a theory which for the first time brought the historical possibilities of geology to the forefront. His calculation of the duration of the successive epochs had, it is true, no empirical basis. Yet it made sufficiently clear to all readers the author's desire to insist upon long periods of time for the slow processes of change in the earth's configuration, and for the appearance of successive forms of plant and animal life. Some of the noteworthy advances made by Buffon were the differentiation which he drew between the primitive rocks formed in the second period, and the sedimentary and volcanic