

rapidly. Steno, a Dane, to whom are owing many important views in regard to the origin of different kinds of strata, first recorded the fact that the oldest rocks are unfossiliferous. In spite of the advance in knowledge the general belief was that fossil remains were deposited by the Mosaic deluge, and this belief being opposed by courageous men and the conflict as to the nature of the fossils being fairly settled, the ground of discussion was transferred to Noah's flood, and until the close of the eighteenth century the theologians had their own way—they pointed out that Noah's deluge was universal, that all life, except what Noah saved, was destroyed, and that it followed that fossils were relics left by the flood. Several dissented, Voltaire and Buffon among the number, but the latter being politely invited by the College to recant and fearing the delicate attentions of his opponents, recanted accordingly.

The beginning of our century marked the commencement of the study of fossils as a science, and the advance since then—and for the first time in history—has been rapid and continuous. I regret we have not time to refer to its triumphs in detail.

This brings us back to Lyell's definition of a fossil as "any body or the traces of the existence of any body, whether animal or vegetable, which has been buried in the earth by natural causes." At first all objects dug up, whether organic or mineral, were called fossil, but when organic remains became generally understood the distinction was made. Palæontology is a modern term, which first came into use in 1830. Petrifications form the most numerous class of fossils, being actual portions of animal or vegetable organisms, such as the shells of molluscs, the skeletons of corals, the crusts of crustaceans, the bones, teeth and scales of fish, the bones and teeth of reptiles and mammals, the bark, leaves or seeds of plants, "and these may be preserved very much in their original condition, or may be altered subsequent to their burial." But, in addition to these two principal kinds, there are the *traces* referred to in the definition quoted, among which traces are the moulds or casts of shells, and the footprints left by animals upon sand or mud. The "*alterations subsequent to their burial*" are usually replacements which either show intimate structure as well as in the original, or fail to do so, the failure or success being proportionate to the rapidity or slowness of decay. The soft or fleshy parts in all cases disappear.