thermal waters, to form rocks? That is what we propose to explain.

During the primary geological periods, thermal waters, as they reached the surface, were discharged into the sea and united themselves with the waves of the vast primordial ocean, and the waters of the sea became sensibly calcareous—they contained, it is believed, from one to two per cent. of lime. The innumerable animals, especially Zoophytes, and Mollusca with solid shells, with which the ancient seas swarmed, secreted this lime, out of which they built up their mineral dwelling—or shell. In this liquid and chemically calcareous medium, the Foraminifera and Polyps of all forms swarmed, forming an innumerable population. Now what became of the bodies of these creatures after death? They were of all sizes, but chiefly microscopic; that is, so small as to be individually all but invisible to the naked eye. The perishable animal matter disappeared in the bosom of the waters by decomposition, but there still remained behind the indestructible inorganic matter, that is to say, the carbonate of lime forming their testaceous covering; these calcareous deposits accumulating in thick beds at the bottom of the sea, became compacted into a solid mass, and formed a series of continuous beds superimposed on each other. These, increasing imperceptibly in the course of ages, ultimately formed the rocks of the *Cretaceous* period, which we have now under consideration.

These statements are not, as the reader might conceive from their nature, a romantic conception invented to please the imagination of those in search of a system—the time is past when geology should be regarded as the romance of Nature—nor has what we advance at all the character of an arbitrary conception. One is no doubt struck with surprise on learning, for the first time, that all the limestone rocks, all the calcareous stones employed in the construction of our dwellings, our cities, our castles and cathedrals, were deposited in the seas of an earlier world, and are only composed of an aggregation of shells of Mollusca, or fragments of the testaceous coverings of Foraminifera and other Zoophytes—nay, that they were secreted from the water itself, and then assimilated by these minute creatures, and that this would appear to have been the great object of their creation in such myriads. Whoever will take the trouble to observe, and reflect on what he observes, will find all his doubts vanish. If chalk be examined with a microscope, it will be found to be composed of the remains of numerous Zoophytes, of minute and divers kinds of shells, and, above all, of Foraminifera, so small that their very minuteness seems to have rendered them indestructible. A