

member of the Paris basin, naturally divide themselves into three groups of strata, characterised, the first, by *Nummulites*; the second by *Miliolites*; and the third or upper beds by *Cerithia*. The beds are also sometimes named Nummulite limestone, Miliolite limestone, and Cerithium limestone. Above these a great mass, generally sandy, is developed. It is marine at the base, and there are indications of brackish water in its upper parts; it is called Beauchamp Sandstone, or Sables Moyens (*Grès de Beauchamp*). These sands are very rich in shells. The *siliceous limestone*, or lower travertin, is a compact siliceous limestone extending over a wide area, and resembles a precipitate from mineral waters. The *gypseous* formation consists of a long series of marly and argillaceous beds, of a greyish, green, or white colour, in the intervals between which a thick deposit of gypsum, or sulphate of lime, is intercalated. This gypsum bed is found in its greatest thickness in France at Montmartre and Pantin near Paris. The formation of this gypsum is probably due to the action of free sulphuric acid upon the carbonate of lime of the formation; the sulphuric acid itself being produced by the transformation of the gaseous masses of sulphuretted hydrogen emanating from volcanic vents, into that acid, by the action of air and water. It was, as we have already said, in the gypsum-quarries of Montmartre that the numerous bones of *Palæotherium* and *Anoplotherium* were found. It is exclusively at this horizon that we find the remains of these animals, which seem to have been preceded by the *Coryphodon*, and afterwards by the *Lophiodon*; the order of succession in the appearance of these animals is now perfectly established. It may be added that round Paris the Eocene formation, from its lowest beds to the highest, is composed of beds of plastic clay, of the *Calcaire grossier* with its *Nummulites*, *Miliolites*, and *Alveolites*, followed by the gypseous formation; the series terminating in the Fontainebleau Sandstone, remarkable for its thickness and also for its fine scenery, as well as for its usefulness in furnishing paving-stone for the capital. In Provence the same series of rocks are continued, and attain an enormous thickness. This upper part of the Eocene deposit is entirely of lacustrine formation. Grignon has procured from a single spot, where they were embedded in a calcareous sand, no less than 400 fossils, chiefly formed of comminuted shells, in which, however, were well-preserved species both of marine, terrestrial, and fresh-water shells. Of the Paris basin, Sir Charles Lyell says: "Nothing is more striking in this assemblage of fossil testacea than the great proportion of species referable to the genus *Cerithium*. There occur no less than 137 species of this genus