

in the Paris basin, and almost all of them in the *Calcaire grossier*. Most of the living *Cerithia* (Figs. 157 and 168) inhabit the sea near the mouths of rivers, where the waters are brackish; so that their abundance in the marine strata now under consideration is in harmony with the hypothesis that the Paris basin formed a gulf into which several rivers flowed."\*

To give the reader some idea of the formation, first come the limestones and lower marls, which contain fine lignite or wood-coal produced from vegetable matter buried in moist earth, and excluded from all access of air, a material which is worked in some parts of the south of France as actively as a coal-mine. In these lignites *Anodon* and other fresh-water shells are found.

From the base of Sainte-Victoire to the other side of Aix, we trace a conglomerate characterised by its red colour, but which dies away in its prolongation westward. This conglomerate contains land-snails (*Helix*) of various sizes, mixed with fresh-water shells. Upon this conglomerate, comprising therein the marls, rests a thick deposit of limestone with the gypsum of Aix and Manosque, which is believed to correspond with that of Paris. Some of the beds are remarkably rich in sulphur. The calcareous marly laminæ which accompany the gypsum of Aix contain Insects of various kinds, and Fishes resembling *Lebias cephalotes*. Finally, the whole terminates at Manosque in a fresh series of marls and sandstones, alternating with beds of limestone with *Limnæa* and *Planorbis*. At the base of this series are found three or four beds of lignite more inflammable than coal, which also give out a very sulphurous oil. We may form some estimate of the thickness of this last stage, if we add that, above the beds of fusible lignite, we may reckon sixty others of dry lignite, some of them capable of being very profitably worked if this part of Provence were provided with more convenient roads.

"The Nummulitic formation, with its characteristic fossils," says Lyell,† "plays a far more conspicuous part than any other Tertiary group in the solid framework of the earth's crust, whether in Europe, Asia, or Africa. It often attains a thickness of many thousand feet, and extends from the Alps to the Carpathians, and is in full force in the north of Africa, as, for example, in Algeria and Morocco. It has been traced from Egypt, where it was largely quarried of old for the building of the Pyramids, into Asia Minor, and across Persia, by Bagdad, to the mouth of the Indus. It occurs not only in Cutch, but in the mountain ranges which separate Scinde from Persia, and

\* "Elements of Geology," p. 300.

† Ibid., p. 305.