

most recent enclosed, but only rarely, unknown plants mingled with known forms. It would thus appear that the deposits of the so-called fourth age were more or less equivalents of those of the three calcareous ages.

The fifth age was characterised by deposits of conglomerate and modern alluvium, containing fossil trees, together with bones and teeth of elephants and other animals. "Such is the general picture," the Abbé remarks, "presented by our old hills of the Vivarais, and of the modern plains around them. The progress of time and, above all, of increased observation will augment the number of epochs which I have given, and fill up the blanks; but they will not change the relative places which I have assigned to these epochs."¹ He felt confident that if the facts observed by him in the Vivarais were confirmed in other regions, a historical chronology of fossil and living organisms would be established on a basis of incontestible truth. In his last volume, replying to some objections made to his opinions regarding the succession of animals in time, he contends that the difference between the fossils of different countries is due not to a geographical but to a chronological cause. "The sea," he says, "produces no more ammonites, because these shells belong to older periods or other climates. The difference between the shells in the rocks rests on the difference in their relative antiquity, and not on mere local causes. If an earthquake were to submerge the ammonite-bearing rocks of the Vivarais beneath the Mediterranean, the sea returning

¹ *Op. cit.* p. 350.