

the most illustrious among the founders of geology, was, as already stated (p. 115), associated early in life with Guettard in the construction of mineralogical maps of France. As far back as the year 1789, he distinguished between what he called littoral banks and pelagic banks, which were formed at different distances from the land, and were marked by distinct kinds of sediment and peculiar organisms. He thought that the different strata, in such a basin as that of the Seine, pointed to very slow oscillations of the level of the sea, and he believed that a section of all the stratified deposits between the coasts and the mountains would furnish an alternation of littoral and pelagic banks, and would reveal by the number of strata the number of excursions made by the waters of the ocean. Lavoisier accompanied his essay with sections which gave the first outline of a correct classification of the Tertiary deposits of the Paris region. His sketch was imperfect, but it represented in their true sequence the white Chalk supporting the Plastic Clay, lower sands, Calcaire Grossier, upper sands and upper lacustrine limestone.<sup>1</sup>

A few years later, a more perfect classification of these Tertiary deposits was published by Coupé, but without sufficiently detailed observations to convince his contemporaries that the work was wholly reliable.<sup>2</sup>

<sup>1</sup> *Mém. Acad. Roy. Sciences* (1789), p. 350, pl. 7. This memoir of Lavoisier on modern horizontal strata and their disposition is fully noticed by Desmarest in the first volume of his *Géographie Physique*, p. 783. Lavoisier's distinction between pelagic and littoral organisms and deposits was afterwards adopted by Lamarck (*postea*, p. 355).

<sup>2</sup> *Journ. de Physique*, tome lix. (1804), pp. 161-176.