

Targioni Tozzetti, of Tuscany, occupied himself with the fossil lenticles (*Nummulites*) of Casciano and Parlascio, which he took for corals, and also with the fossil remains of land mammalia that are distributed in the valley of the Arno, in Val di Chiana, and Ombrosa. Targioni showed conclusively that the mammalia had lived in these valleys, and had not been carried there by any diluvial catastrophe, or brought by the Carthaginians.

To Christopher Packe we are indebted for the first geological map of a part of England in his work, *A New Philosophical-Chorographical Chart of East Kent*, published in 1743. The map embraces a district of 32 English miles in the east of Kent, and the descriptions in the text are illustrated in the map by special signatures and lines.

Lehmann¹ had an ample knowledge of the minerals and fossils that occur in the rocks of Prussia. His work, *Versuch einer Geschichte des Flötzgebirge* (Berlin, 1756), contains a wealth of carefully observed data, and an elaborate statement of his ideas about the origin and composition of the earth's crust. Lehmann accepts a universal deluge, which dissolved or carried away in suspension much of the loose surface material of the primeval mountains. The fine earth and clay thus removed was precipitated as horizontal layers on the sides and at the base of the mountains, and formed the stratified deposits (*Flötzgebirge*). As the waters receded, these deposits, together with the remains of plants and animals that had fallen upon the sea-floor, hardened into solid rock.

Lehmann distinguished the primitive rocks from those of derived origin by their greater height, and by the nature of the veins or dykes (*Ganggesteine*) that occur in them. He did not, however, differentiate between the mode of origin of the so-called vein-rocks and the stratified systems. He thought the vein material had also originated from water, but had been laid down in disorder in the early periods of creation before the universal deluge, so that it was vertically or diagonally deposited, and contained few or no fossils.

¹ Johann Gottlob Lehmann was a teacher of mineralogy and mining in Berlin. His writings extend over chemical, mineralogical, geological, and mining subjects. In 1761 the Czarina Catherine elected him Professor of Chemistry, and Director of the Imperial Museum at St. Petersburg, but he died in 1767 from injuries caused by the explosion of a retort filled with arsenic.