

concerning the ancient history of the globe, both by ancient and modern writers, are reviewed ; and the merits and defects of the doctrines of Hooke, Ray, Moro, Buffon, and others, fairly estimated. Great admiration is expressed for the hypothesis of Hooke, and his explanation of the origin of the strata is shown to have been more correct than Moro's, while their theory of the effects of earthquakes was the same. Raspe had not seen Michell's memoirs, and his views concerning the geological structure of the earth were perhaps less enlarged ; yet he was able to add many additional arguments in favour of Hooke's theory, and to render it, as he said, a nearer approach to what Hooke would have written had he lived in later times. As to the periods wherein all the earthquakes happened, to which we owe the elevation of various parts of our continents and islands, Raspe says he pretends not to assign their duration, still less to defend Hooke's suggestion, that the convulsions almost all took place during the deluge of Noah. He adverts to the apparent indications of the former tropical heat of the climate of Europe, and the changes in the species of animals and plants, as among the most obscure and difficult problems in geology. In regard to the islands raised from the sea, within the times of history or tradition, he declares that some of them were composed of strata containing organic remains, and that they were not, as Buffon had asserted, made of mere volcanic matter. His work concludes with an eloquent exhortation to naturalists to examine the isles which rose, in 1707, in the Grecian Archipelago, and, in 1720, in the Azores, and not to neglect such splendid opportunities of studying nature "in the act of parturition." That Hooke's writings should have been neglected for more than half a century, was matter of astonishment to Raspe ; but it is still more wonderful that his own luminous exposition of that theory should, for more than another half century, have excited so little interest.

*Fuchsel*, 1762 and 1773.—Fuchsel, a German physician, published, in 1762, a geological description of the country between the Thuringerwald and the Hartz, and a memoir on the environs of Rudelstadt\* ; and afterwards, in 1773, a theoretical work on the ancient history of the earth and of man.† He had evidently advanced considerably beyond his predecessor Lehman, and was aware of the distinctness, both as to position and fossil contents, of several groups of strata of different ages, corresponding to the secondary formations now recognized by geologists in various parts of Germany. He supposed the European continents to have remained covered by the sea until the formation of the marine strata called in Germany "muschelkalk," at the same time that the terrestrial plants of many European deposits, attested the existence of dry land which bordered the ancient sea ; land which, therefore, must have occupied the place of the present ocean. This pre-existing continent had been *gradually*

\* Acta Academiæ Electoralis Maguntinæ, vol. ii. Erfurt.

† This account of Fuchsel is derived

from an excellent analysis of his memoirs by M. Keferstein. Journ. de Géologie, tom. ii. Oct. 1830.