

CHAPTER II.

FORMATION OF SYSTEMATIC DESCRIPTIVE GEOLOGY.

Sect. 1.—Discovery of the Order and Stratification of the Materials of the Earth.

THAT the substances of which the earth is framed are not scattered and mixed at random, but possess identity and continuity to a considerable extent, Lister was aware, when he proposed his map. But there is, in his suggestions, nothing relating to stratification; nor any order of position, still less of time, assigned to these materials. Woodward, however, appears to have been fully aware of the general law of stratification. On collecting information from all parts, "the result was," he says, "that in time I was abundantly assured that the circumstances of these things in remoter countries were much the same with those of ours here: that the stone, and other terrestrial matter in France, Flanders, Holland, Spain, Italy, Germany, Denmark, and Sweden, was distinguished into *strata or layers*, as it is in England; that these strata were divided by parallel fissures; that there were enclosed in the stone and all the other denser kinds of terrestrial matter, great numbers of the shells, and other productions of the sea, in the same manner as in that of this island."¹ So remarkable a truth, thus collected from a copious collection of particulars by a patient induction, was an important step in the science.

These general facts now began to be commonly recognized, and followed into detail. Stukely the antiquary² (1724), remarked an important feature in the strata of England, that their *escarpments*, or steepest sides, are turned towards the west and north-west; and Strachey³ (1719), gave a stratigraphical description of certain coal-mines near Bath.⁴ Michell, appointed Woodwardian Professor at Cambridge

¹ *Natural History of the Earth*, 1723.

² *Itinerarium Curiosum*, 1724.

³ *Phil. Trans.* 1719, and *Observations on Strata, &c.* 1729.

⁴ Fitton, *Annals of Philosophy*, N. S. vol. i. and ii. (1832, '3), p. 157.