

CHAPTER VI.

STRATIGRAPHICAL GEOLOGY.

The Early Foundations of Stratigraphy.—In the year 1762, Füchsel proposed the term *Formation* for a series of strata accumulated under similar conditions and in immediate succession to one another. The expression was meant to indicate not only the origin, but also a certain horizon in the stratigraphical succession, and the particular geological age of the series. By Werner's use of the term, it was given an essentially petrographical significance, and lost Füchsel's conception of the serial succession of rock-deposits. In Werner's teaching, the rocks of similar petrographical character were united into a formation; thus the sandstones were regarded as a "formation" distinct from the limestones, and the limestones represented a "formation" distinct from shales, porphyries, etc. But as formations of sandstone, limestone, etc., recurred again and again in the rock-succession, Werner's system allowed for this repetition by grouping the different petrographical formations into "suites," and supposing each suite to represent a definite period in the history of sedimentation.

Brongniart and Cuvier, as well as most of their contemporaries in France, associated with the term *Formation* merely the conception of a particular mode of origin and consequent character of the deposit. On the other hand, for a complex group of strata accumulated within a definite geological epoch, the expression *Terrain* was suggested by Bonnard, Brongniart, and Prévost. In the works of De la Beche, the term *Group*, in Murchison's writings the term *System*, is synonymous with Füchsel's conception of *Formation*.

Humboldt followed Werner in giving to the *Formation* chiefly a genetic and petrographical significance, but he assigned also a certain chronological value. He defined the Formations as "Systems of mineralogical accumulations, which