CHAPTER II.

ON THE NATURE AND COMPOSITION OF THE SPECIMENS OF DEEP-SEA DEPOSITS COLLECTED DURING THE CHALLENGER EXPEDITION, AND THEIR VARIATIONS WITH CHANGE OF CONDITIONS.

In this chapter each specimen of marine deposit collected during the Challenger Expedition is described with considerable detail in a series of Synoptical Tables, and these Tables are followed by observations indicating the more striking variations which these deposits undergo with a change in the depth, in latitude, in the temperature of the surface waters, and in the distance from continental and other lands.

a. Synoptical Tables.

In Chapter I. the methods followed in the macroscopic and microscopic examination, as well as in the chemical analyses of the deposits, have been pointed out. The results obtained by the application of these methods to the study of the Challenger collections are set forth in the following Synoptical Tables, which form a methodical repertory of the facts observed at each of the Challenger's sounding and dredging stations in so far as these refer to the deposits now in process of formation. The descriptions follow the order in which the specimens were collected during the voyage. The specimens have all been treated in a uniform manner, and it is believed that these Tables contain all essential details regarding the characteristic properties of each specimen of the deposits. The numbers of the stations correspond to those on the charts and diagrams at the end of the volume, in which the temperature conditions and the geographical and bathymetrical distribution of the deposits are represented. The reader is referred to the previous chapter for a definition of all the terms and headings made use of in the tables.[1]

The facts summarised in these Tables serve as a foundation for the descriptions in Chapter III., where each type of Deep-Sea Deposit is considered in its ensemble, and for the conclusions in subsequent chapters where the origin of the materials which make up these deposits is discussed. In addition, however, to the Challenger collections, a very large number of samples from other expeditions and from many other regions of the ocean, have been examined in a similar manner, and have likewise served as a foundation for all general conclusions.

[1] See page 26.