

may suppose us to be from any information on this subject, it will be hereafter shown that the opinions which have been formed are not altogether conjectural. The subject of the present chapter will, we think, be best explained by first considering the condition of rocks, or the crust of the earth ; and, secondly, of that vast space beneath them, called the interior of the earth.

THE CRUST OF THE EARTH.

That part of the interior of the earth open to investigation, has been appropriately called its crust. It is but the crust in relation to its thickness, as compared with the semi-diameter of the earth ; and it may be found true in another sense, when the laws of the increase of internal heat have been fully determined.

Every one knows that the rocks which are exposed on the surface of the earth are marked by great diversities of external characters and of chymical composition. In one place we find a granite, in another a rock that bears upon it the marks of igneous fusion, in a third sandstone, and in a fourth clay ; and all these may occur in an extremely limited district. The investigator will be, first of all, anxious to ascertain if they have any constant relation to each other, and to form some general subdivision that may guide him in identifying the rocks of one place with those of the same kind which may occur in another. Now, there are two great classes of rocks ; one is called the primitive, and consists of those which lie at the basis of the series ; and the other is the secondary, which contains the rocks that have been produced by the transport or sediment of mineral substances accumulated by various causes.

Without entering into any lengthened description of rocks or their superposition, we shall state a few principles which may, it is thought, be fairly deduced from the appearance and condition of the mineral masses ; giving, at the same time, the deductive process by which these principles are ascertained. The reader may thus acquire a general notion of the manner in which geologists trace the physical history of the earth, while, at the same time, he informs himself as to the result of their investigations.

1. The causes which are now active in destroying and forming rocks, must have produced the same effects from the