

or by which they may be arranged. Their peculiarities of form and disposition, whether constituting irregular masses, strata, or veins, are subsequent objects of consideration; and their natural history is rendered complete by investigating their order of succession or their other mutual relations, the influence which they may exert on each other, the general analogies which they bear to the whole system, and the causes, nature, and consequences of the changes which they have undergone or may be undergoing. Lastly, for the purposes of mineral topography, it is necessary to determine their geographical boundaries: the geologist being thus enabled, by the aid of maps and sections, to refer accurately to them, whether for œconomical objects or the mere purpose of elucidation. The examination of mineral or metallic veins, forms another distinct object of geological investigation: nor is the geologist exempted from the study of minerals, though mineralogy has been erected into a separate pursuit. The mineralogist may pursue the minutiae of his own department, with little aid from geology; but he will be a very imperfect geologist who is not acquainted with those objects, for the discovery of which, mineralogy will most frequently be indebted to him.

If the multitude and variety of organic remains shall appear sufficient to exempt the geologist from a minute investigation of all these objects, and to permit him to divide this labour with the cultivators of Zoology and Botany, still it is his especial duty to determine the substances in which they are imbedded, the nature and relative antiquity of these, and a multitude of other circumstances which it would now be superfluous to detail. For his own immediate ends, he must possess, at least a considerable knowledge of the characters and analogies of fossil animals and vegetables,