

PART IV.



HISTORICAL GEOLOGY.

SUBDIVISIONS IN GEOLOGICAL HISTORY AND METHODS OF CORRELATION.

NATURE OF SUBDIVISIONS IN THE HISTORY.

IN the study of geology, there is often an expectation to find strongly drawn lines between the eras and periods, or the corresponding subdivisions of the rocks; but geological history is like human history in this respect. Time is one in its course, and all progress one in plan.

Some grand strokes there may be, — as in human history there is a beginning in man's creation, and a new starting-point in the advent of Christ. But all attempts to divide the course of progress in man's historical development into periods with bold confines are fruitless. We may trace out the culminant phases of different periods in that progress, and call each culmination the center of a separate period. But the germ of the period was long working onward in preceding time, before it finally came to its full development and stood forth as the characteristic of a new era of progress. It is all one progress, while successive phases stand forth in that progress.

In geological history, the earliest events were simply physical. While the inorganic history was still going on (although finished in its more fundamental ideas), there was, finally, the introduction of *life*, — a new and great step of progress. That life, beginning with the lower grades of species, was expanded and elevated, through the appearance of new types, until the introduction of Man. In this organic history, there are successive steps of progress, or a series of culminations. As the tribes, in geological order, pass before the mind, the reality of one age after another becomes strongly apparent. The era of Mammals, the era of Reptiles, and the era of Coal-plants come out to view, like mountains in the prospect, although, if the mind should attempt to define precisely where the slopes of the mountain end, as they pass into the plain around, it might be greatly embarrassed.

We note here the following important principles: —

First. The reality of an era in history is marked by the development of some new idea in the system of progress.