

fied by large admixtures of animal and vegetable remains.

As the action of all these forces will be rendered most intelligible by examples of their effects, I at once refer my readers for a synoptic view of them, to the section which forms the first of my series of plates.\* The object of this section is, first, to represent the order in which the successive series of stratified formations are piled on one another, almost like courses of masonry; secondly, to mark the changes that occur in their mineral and mechanical condition; thirdly, to show the manner in which all stratified rocks have at various periods been disturbed, by the intrusion of unstratified crystalline rocks; and variously affected by elevations, depressions, fractures, and dislocations; fourthly, to give examples of the alterations in the forms of animal and vegetable life, that have accompanied these changes of the mineral conditions of the earth.

From the above section it appears that there are eight distinct varieties of the crystalline unstratified rocks, and twenty-eight well defined divisions of the stratified formations. Taking the average maximum thickness of each of these divisions, at one thousand feet,† we should have

\* The detailed explanation of this section is given in the description of the plates in vol. ii.

† Many formations greatly exceed, whilst others fall short, of the average here taken.