

able monographs of special fossil faunas in the majority of cases makes only the slenderest pretext of any connection with recent systematic zoology; if there is a difficulty, then stratigraphical arguments are made the basis of a solution. Zoological students are, as a rule, too actively engaged and keenly interested in building up new observations to attempt to spell through the arbitrary palæontological conclusions arrived at by many stratigraphers, or to revise their labours from a zoological point of view.

Until the sixth decade of the nineteenth century the exact description of genera and species received the chief attention in the literature both of zoology and stratigraphical palæontology. The individual faunas and floras of the past time were regarded by the adherents of the Catastrophal Theory as creations quite distinct from one another, whose order of succession and whose mutual relations it was the first duty of stratigraphy and palæontology to determine. In a prize essay of the Paris Academy, entitled "Investigations of the developmental laws of the organic world during the period of formation of our Earth's Surface" (Stuttgart, 1858), H. G. Bronn has supplied a valuable compendium of all the known palæontological material and the distribution of the fossils in the different strata.

In this work Bronn criticises unfavourably the theories of creation and development advanced by Lamarck, Geoffroy Saint-Hilaire, Oken, Grant, and others. He admits that modifications of organic forms may produce racial distinctions, but regards as fallacious, or at least wholly hypothetical, the *generatio æquivoca*, the gradual modification of species, the descent of all younger forms from older, as well as the evolution of more highly-perfected organisms from those on a lower platform of organisation. He assumes a creative force which not only brought forth the first organisms, but had continued during subsequent geological epochs to the present age, and had worked independently of chance circumstances and according to a definite plan. The unity of this plan was the basis of the apparent relationships between the types of successive creations; as certain types became extinct, others were created of similar but more perfect design to replace the gap in the organic world. Thus, by repeated substitutions, as Sedgwick, Hugh Miller, Brongniart, and Agassiz had already advocated, Bronn tries to explain the universal tendency in animate