

to summarize the whole history of geology, I think it will be more interesting and profitable to pass somewhat briefly over ancient and medieval time during which geological ideas were crudely taking shape ; to dwell rather fully on the labours of a few of the early masters, who, by actual observation of nature and deduction therefrom, laid the broad foundations of the science, to touch only lightly on the work of some of their less illustrious contemporaries, and to do little more than allude to the modern magnates whose life and work are generally familiar. I have accordingly selected for fullest treatment, in this volume, what has been called the Heroic Age of geology, or the period which extends from the middle of the eighteenth to the earlier decades of the nineteenth century, an interval of about seventy years. A few later conspicuous names will require some brief notice in order to fill up the general outlines of our picture.

The most casual observation is now-a-days sufficient to convince us that the surface of the earth has not always been as it is to-day. At one place sheets of sand and gravel point to the former presence of running water, where none is now to be seen. Elsewhere shells and other marine organisms underneath the soil show that the dry land was formerly the bed of the sea. Masses of sandstone, conglomerate and limestone, once evidently laid down in horizontal layers on the sea-bottom, but now hardened into stone, disrupted, placed on end, and piled up into huge hills and mountain-ranges, prove beyond all question to our modern eyes that stupendous disturbances attended the conversion of the sea-floor into land.