

illustrious of the Arab authors was the famous Avicenna (Ibn-Sina, 980-1037), the translator of Aristotle, whose views he largely adopted. But if the volume "On the conglutination of Stones" be truly ascribed to him, he expressed, more clearly than his Greek master, opinions regarding the origin of mountains and valleys which show a singular forecast of modern geology. "Mountains," he says, "may arise from two causes, either from uplifting of the ground, such as takes place in earthquakes, or from the effects of running water and wind in hollowing out valleys in soft rocks and leaving the hard rocks prominent, which has been the effective process in the case of most hills. Such changes must have taken long periods of time, and possibly the mountains are now diminishing in size: What proves that water has been the main agent in bringing about these transformations of the surface, is the occurrence in many rocks of impressions of aquatic and other animals. The yellow earth that clothes the surface of the mountains is not of the same origin as the framework of the ground underneath it, but arises from the decay of the organic remains, mingled with earthy materials transported by water. Perhaps these materials were originally in the sea which once overspread all the land."

With the revival of learning in Europe, attention was once more drawn to the problems presented by the rocks that form the dry land. More particularly did the occurrence of fossil shells, far distant from the sea, arouse inquiry. We have seen that in the days of ancient Greece and Rome the questions suggested by these objects did not wholly escape attention, and that