

thing else, the knowledge and comparison of petrifications ought to disclose to us the pedigree of organisms. However simple and clear this may seem in theory, the task becomes extremely hard and complicated when it is actually taken in hand. Its practical solution would be very difficult even if the petrifications were to any extent completely preserved. But this is by no means the case. The obvious records of creation which lie buried in petrifications are imperfect beyond all measure. Hence it is necessary critically to examine these records, and to determine the value which petrifications possess for the history of the development of organic tribes. As I have previously discussed the general importance of petrifications as the records of creation, when we were considering Cuvier's merits in the science of fossils, we may now at once examine the conditions and circumstances under which the remains of organic bodies became petrified and preserved in a more or less recognizable form.

As a rule we find petrifications or fossils enclosed only in those stones which have been deposited in layers as mud by water, and which are on that account called neptunic, stratified, or sedimentary rocks. The deposition of such strata could of course only commence after the condensation of watery vapour into liquid water had taken place in the course of the earth's history. After that period, which we considered in our last chapter, not only did life begin on the earth, but also an uninterrupted and exceedingly important transformation of the rigid inorganic crust of the earth. The water began that extremely important mechanical action by which the surface of the earth is perpetually, though slowly, transformed. I may surely presume that it is generally known what an extremely