BOOK V

PALÆONTOLOGICAL GEOLOGY

PALÆONTOLOGY treats of the structure, affinities, classification, and distribution in time of the forms of plant and animal life imbedded in the rocks of the earth's crust. Considered from the biological side, it is a part of zoology and botany. A proper knowledge of extinct organisms can only be attained by the study of living forms, while our acquaintance with the history and structure of modern organisms is amplified by the investigation of their extinct progenitors. Viewed, on the other hand, from the physical side, palæontology is a branch of geology. It is mainly in this latter aspect that it will here be discussed.

Palæontology or Palæontological Geology deals with fossils or organic remains preserved in natural deposits, and endeavors to gather from them information as to the history of the globe and its inhabitants. The term fossil, meaning literally anything "dug up," was formerly applied indiscriminately to any mineral substance taken out of the earth's crust, whether organized or not. Ordinary minerals and rocks were thus included as fossils. For many years, however, the meaning of the word has been so restricted as to include only the remains or traces of plants and animals preserved in any natural formation, whether hard rock or loose superficial deposit. The idea of antiquity or relative date is not necessarily involved in this conception of the