

of geological history called *Archean Time*. These oldest rocks are largely crystalline in character, so that there can be but little chance of encountering organic forms, even had they earlier existed in the strata. Even the least altered deposits, although they have afforded a few scattered remains of archaic forms at certain points, contain nothing more than the merest traces of the organisms of this early time.

When, however, life does once appear in all its variety, it is well nigh the same in all the older rocks. In the most widely separated localities the same types recur in rocks of the same age, and this furnishes us with the key to the succession of deposits. From the time when the oldest fossil-bearing stratum was deposited until now, the story of life-progress and development is told by the rocks with sufficient clearness to be unmistakable. Local differences of conditions have probably always prevailed, as they do now, but the same types of organisms have always lived at the same time over the entire globe, so that their remains serve as sufficient criteria for the correlation of the strata which contain them. The sequence of life-forms once made out gives us, for the whole earth, the means for fixing the order of deposits even when this is most profoundly disarranged by foldings of the strata into mountains or by other earth movements.

Geologists distinguish three principal divisions in the history of life as read in the record of the rocks. During the earliest of these great time-divisions, archaic forms of life flourished—uncouth fishes, crustaceans, mollusks, and tree-ferns—most of them very unlike those now extant. On this account this is known as the period of most ancient life or *Paleozoic Time*. To this succeeded a long lapse of ages when enormous reptiles predominated, associated with other types more like those that now inhabit the globe. To this is given the name of middle life or *Mesozoic Time*. Finally living things began to assume the form and appearance with which we are familiar, so that this last grand time-division, which includes the present, is designated as the period of recent life or *Cenozoic Time*.

Each of these three grand divisions of geologic time is in its turn separated into shorter subdivisions called *Periods*, characterized by