evolution of the planet. He finds that they have in large measure arranged themselves in chronological sequence—the oldest lying at the bottom and the newest at the top. Relics of an ancient sea-floor are overlain with traces of a vanished land-surface; these are in turn covered by the deposits of a former lake, above which once more appear proofs of the return of the sea. Among these rocky records, too, lie the lavas and ashes of long-extinct volcanoes. The ripple left upon a sandy beach, the cracks formed by the sun's heat upon the muddy bottom of a dried-up pool, the very imprint of the drops of a passing rain-shower, have all been accurately preserved, and often bear witness to geographical conditions widely different from those that exist where such markings are now found.

But it is mainly by the remains of plants and animals imbedded in the rocks that the geologist is guided in unravelling the chronological succession of geological changes. He has found that a certain order of appearance characterizes these organic remains; that each successive group of rocks is marked by its own special types of life; that these types can be recognized, and the rocks in which they occur can be correlated, even in distant countries, where no other means of comparison are available. At one moment, he has to deal with the bones of some large mammal scattered through a deposit of superficial gravel, at another time, with the minute foraminifers and ostracods of an upraised sea-bottom. Corals and crinoids, crowded and crushed into a massive limestone on the spot where they lived and died, ferns and terrestrial plants matted together into a bed of coal where they originally grew, the scattered shells of a submarine sand-bank, the snails and lizards that left their mouldering remains within a hollow tree, the in-