

countries are compared, all that we can safely affirm regarding them is that those containing the same or a representative assemblage of marine organic remains belong to the same epoch in the history of biological progress in each area. They are *homotaxial*; but we cannot assert that they are contemporaneous unless we are prepared to include within that term a vague period of many thousands of years.

3. Imperfection of the Geological Record.²⁵
—Since the statement was made by Darwin, geologists have more fully recognized that the history of life has been very imperfectly preserved in the stratified parts of the earth's crust. Apart from the fact that, even under the most favorable conditions, only a small proportion of the total flora and fauna of any period would be preserved in the fossil state, enormous gaps occur where, from non-deposit of strata, no record has been preserved at all. It is as if whole chapters and books were missing from a historical work. But even where the record may originally have been tolerably full, powerful dislocations have often thrown considerable portions of it out of sight. Sometimes extensive metamorphism has so affected the rocks that their original characters, including their organic contents, have been destroyed. Oftenest of all, denudation has come into play, and vast masses of strata have been entirely worn away, as is shown not only by the erosion of existing land-surfaces, but by the abundant unconformabilities in the structure of the earth's crust.

While the mere fact that one series of rocks lies unconformably on the denuded surface of another, proves the

²⁵ See p. 1121.