

based, however, upon a wide basis of evidence, seeing that the progress of development has been far from equal in all ranks of the animal world.

Observations made over a large part of the surface of the globe have enabled geologists to divide the stratified part of the earth's crust into systems, formations, and groups (p. 1127). These subdivisions are frequently marked off from each other by lithological characters. But, as already remarked, mere lithological differences afford at the best but a limited and local ground of separation. Two masses of sandstone, for example, having exactly the same general external and internal characters, may belong to very different geological periods. On the other hand, a series of limestones in one locality may be the exact chronological equivalent of a set of sandstones and conglomerates at another, and of a series of shales and clays at a third.

Some clew is accordingly needed which will permit the divisions of the stratified rocks to be grouped and compared chronologically. This fortunately is well supplied by their characteristic fossils. Each formation being distinguished by its own assemblage of organic remains, it can be followed and recognized even amid the crumplings and dislocations of a disturbed region. The same general succession of organic types has been observed over a large part of the world, though, of course, with important modifications in different countries. The similarity of succession has been called *homotaxis*—a term which expresses the fact that the order in which the leading types of organized existence have appeared upon the earth has been similar even in widely separated regions.²²

²² Huxley, Q. J. Geol. Soc. xviii. 1862, p. xlvi.