

of life, and we accordingly find that many genera which are abundant in certain rocks are not to be found in others, and are now extinct. But it is a singular circumstance, and perhaps scarcely to be accounted for on known principles, that every suite of beds contains fossils peculiar to itself, and by these it may be very readily distinguished.

#### THE ORDER OF ROCKS.

The term rock is applied to all masses of mineral substances, whether they be granites, clays, sands, or other compounds. The word, in its common acceptation, means a mass of some hard mineral, but it is used by geologists in a more general sense, and signifies a component part of the earth's crust, without reference to the quality of hardness or tenacity, and in this sense a bed of clay or of sand is a rock.

From a partial examination of rocks, it might be supposed that they are indiscriminately situated in relation to one another. This is the common opinion, and is believed by all those who are quite ignorant of the science of geology. The interior of that world which exhibits such wonderful order and skilful arrangement on its surface, is, in their imagination, a very type of confusion. So natural is this supposition, that it is probable we might still indulge the error, had not the investigations of miners insensibly led them to trace the connexion of one rock with another. It was early discovered by these practical geologists, that certain ores could only be found in certain rocks, and that they were always associated with others of a particular character. In their search for ores, after this discovery had been made, they endeavoured to assure themselves of the presence of some of these beds, before they expended either capital or labour in closer examination. The more scientific observations which have been since made, have extended the facts first observed in particular instances to the entire system of mineral masses, and there is now no principle better substantiated than the regular arrangement or order of rocks.

This statement may appear somewhat inconsistent with the remarks already made, and it is quite possible to give it a too minute acceptation. The earth is not composed of a series of beds arranged one over another, like the coats of an onion, nor are the strata so equably spread over each other that it is only necessary to pass through them in one place to