

condary formations, which form the most important and difficult part of the problem. For a long time naturalists employed themselves very unavailingly in determining the superstrata of their layers and the relation of these layers with those sorts of animals and plants whose remains they contain.

Are there animals and plants peculiar to certain layers, and which are not met with in others? What is the species of those which first appear, or which come after? Are those two species ever found together? Are there variations in their return; or, in other words, do the first again recur, and do the second then disappear? Have these animals and plants all lived in the places where their remains are found, or have some of them been conveyed elsewhere? Do they all exist at present any where, or have they been wholly or partly destroyed? Is there a perpetual uniformity between the antiquity of the layers and the resemblance or non-resemblance of the fossils with living beings? Is there a similarity of climate between fossils and those of living beings which most resemble them? Can we determine that the removal of these beings (if there has been any) has been from north to south or from east to west, or by scattering and mixture; and can we distinguish the epochs of those removals by the layers which have these marks impressed on them?

How can we decide on the actual state of the globe, if we cannot answer these questions, if we have not sufficient grounds to enable us to determine in the affirmative or negative? Besides, it is but too true that during a long period none of these points have been absolutely cleared up; in fact, it was scarcely deemed expedient to clear them up previous to the formation of a system.