from west to east across the Secondary and Tertiary strata, and examine the fossils found in successive formations, we discover that *they are not the same in all*, and that most of them contain *marine* organic remains, which are in each formation of *species* and sometimes of *genera* more or less distinct from those in the formations immediately above or below.[1]

Thus turning again to fig. 5, p. 25, the Red Marly series No. 1, is rarely fossiliferous, and such fossils as these beds may contain are chiefly land plants, footprints of Amphibia, and small bivalve crustaceans. The Rhætic beds 2, contain sea-shells of a few genera and species, the latter somewhat distinct from those found in the Lower Lias No. 3, the fossils of which are again partly, but not altogether, of different species from those buried in the Marlstone No. 4, which again partly differ from the forms in the Upper Lias clay No. 5, and so on, stage by stage, through the remaining strata of the Oolitic rocks, up to the Kimeridge Clay No. 11. Throughout the whole series from the Rhætic beds (2), upwards to the Kimeridge Clay (11), there is an intimate relation, for in all the Liassic and Oolitic formations the general facies, that is to say, the grouping of *genera* (Ammonites, Belemnites, Terebratulæ, Pholadomyas, Oysters, &c.) is the same, and some species generally pass from each formation into the next above it; and not only so, but sometimes through several formations. There is, however, generally enough of difference in the species found in the different formations to enable anyone with sufficient knowledge to tell by fossils alone, if he found enough of them. what formation he may chance to be examining. When,

[1] There are also a few freshwater deposits, but the discussion of these is not essential to the present argument.