

might have occurred at the depression of the former, and antecedent to the deposition of the chalk, must remain a question, till the interval between the uppermost lignite and the chalk is better known than it seems yet to be. In the preceding one, at least, supra-marine rocks are degraded, through a long period, but marine animals do not exist, or have become rare. If I formerly called this a great blank in the Theory of the Earth, I cannot but consider the present view as proved: while, under a revolution of this character, we ought perhaps to expect what has not yet been found; discordance of position, as in other cases, and this now forming the real blank. If the general relation of the chalk to the green sand, marks, like that of the oolithe to the red marl, the gradual increase of life, after extinction, I need but slightly repeat, that the clays, sands, and gravels often found above it, must have been superior marine deposits, whether they are now rocky strata or not, and that it is not therefore the last. I have left little to say respecting the lignite coals. Except in some few cases of transportation, and in others, where they have been derived from marine plants, their origin is similar to that of the inferior one, if perhaps they are always the produce of shores or æstuaries, while the other is often lacustral. Taking as our type, the great floats of wood brought down by the American rivers, we can conjecture respecting those of transportation: but this source is excluded whenever they are repeated with intermediate rocky strata, and with vegetable fragments and beds of shells, marking a regular stratification under repose; as it is also, under the great extent which many occupy. But for the certainty of this, the former view of revolutions and conditions, from the coal to the chalk, would be a fable: while in this case, as in the inferior