

bed, which occupies, in Caithness and elsewhere on the east coast, the second place in the system reckoned from the top downwards, and the third from the bottom upwards, occupy exactly the same place in Assynt, and not the place of any of the other beds? Or why should the red, rough-grained sandstone, with its included pebbles, which occupies the first place in the system of the east coast reckoning upwards, occupy also the first place, reckoning upwards, in that of the west coast, and not the place of any of the three beds which overlie it? Or, further, why should the place of the two great sandstone beds of the east-coast system, in their position as second and fourth, be occupied in the west-coast system by arenaceous beds also second and fourth in the series, instead of being occupied by beds not arenaceous? The number of the chances against such thorough coincidences as that exemplified here, regarded simply as chances, are so great, that they will be found to occur in no two British systems not indetical. The probability, so to speak, that an unaltered system which in one locality is fossiliferous in one of its beds and non-fossiliferous in any of the others, should in another locality be slightly altered in all its beds, and, in consequence, non-fossiliferous in them all, is a probability which must be regarded as having many more chances in its favor.

Let me also remark, that the Old Red system of the east coast, which rests, as I have said, on the unconformable gneiss, is overlaid in several localities, as at Eathie and Shandwick, by beds of the Liassic formation. A wide gap occurs in the geologic scale in these northern districts: the Carboniferous, Permian, and Triassic systems, are wanting; and along the northern side of the Moray Frith generally the Old Red Sandstone forms the immediate base of the Lias,—a formation which, though it barely appears on the edge of the land there, is apparently largely developed under the bed of the German