

ference. And a corresponding style of reasoning, based on the corresponding fact of the breaking up and piecemeal disappearance of the group of organized being, seems equally admissible. It is somewhat difficult to conceive how at least *many* more volumes of the geologic record than the known ones could be got up without the *club*. Further, — so far as yet appears, the fish must have lived in advance of the reptile during the three protracted periods of the Old Red Sandstone, the two still more protracted periods of the Upper and Lower Silurians, and the perhaps more protracted period still of the Cambrian deposits ; — in all, apparently, a greatly more extended space than that in which the reptile lived in advance of the quadrupedal mammal, or the quadrupedal mammal lived in advance of man. On principles somewhat similar to those on which, with reference to the average term of life, the genealogist fixes the probable period of some birth in his chain of succession of which he cannot determine the exact date, it seems natural to infer that the *birth* of the fish should have taken place at least not earlier than the times of the Cambrian system.

There is another consideration, of at least equal, if not greater weight. A general correspondence is found to obtain in widely-separated localities, in the organic contents of that lowest band of the Lower Silurian or Cambrian system in which fossils have been detected. In Russia, in Sweden, in Norway, in the Lake district of England, and in the United States, there are certain rocks which occupy relatively the same place, and enclose what may be described generally as the same remains. They occur in Scandinavia as that “*fucoïdal band*” of Sir Roderick Murchison which forms the base of the vast Palæozoic basin of the Baltic ; they exist in Cumberland and Westmoreland as the Skiddaw slates of Professor Sedgwick, and bear