

been the perennial abodes of pelagic and abyssal creatures and the refuge of multitudes of other marine animals and plants in times of continental elevation. These general facts are full of importance with reference to the question of the succession of formations and of life in the geological history of the earth.

So much space has been occupied with these general views, that it would be impossible to trace the history of the Atlantic in detail through the ages of the Palæozoic, Mesozoic, and Tertiary. We may, however, shortly glance at the changes of the three kinds of surface already referred to. The bed of the ocean seems to have remained, on the whole, abyssal; but there were probably periods when those shallow reaches of the Atlantic which stretch across its most northern portion, and partly separate it from the Arctic basin, presented connecting coasts or continuous chains of islands sufficient to permit animals and plants to pass over.¹ At certain periods also there were, not unlikely, groups of volcanic islands, like the Azores, in the temperate or tropical Atlantic. More especially might this be the case in that early time when it was more like the present Pacific; and the line of the great volcanic belt of the Mediterranean, the mid-Atlantic banks, the Azores and the West India Islands point to the possibility of such partial connections. These were stepping stones, so to speak, over which land organisms might cross, and some of these may be connected with the fabulous or pre-historic Atlantis.

In the Palæozoic period, the distinctions already referred to, into continental plateaus, mountain ridges, and ocean depths, were first developed, and we find, already, great masses of sediment accumulating on the seaward sides of the old Laurentian ridges, and internal deposits thinning away from these ridges over the submerged continental areas, and presenting dissimilar

¹ It would seem, from Geikie's description of the Faroe Islands, that they may be a remnant of such connecting land, dating from the Cretaceous or Eocene period.