

to such gigantic dimensions. It is curious also to reflect that had the bearing of geological history on the facts of distribution been as well known forty years ago as it is now, the reasoning of the great naturalist on this and similar cases might have taken an entirely different direction.

The Galapagos are placed exactly on the equator, and therefore out of reach of the glacial cold, tho from their isolation in the ocean, and the effects of the currents flowing along the American coast, their climate is not extremely hot. They are 600 miles west of South America, and the separating ocean is in some parts 3000 fathoms deep. The largest of the islands is 75 miles in length, and some of the hills attain an elevation of about 4000 feet, so that there are considerable varieties of station and climate. So far as known they are wholly volcanic, and they may be regarded as the summits of submerged mountains not unlike in structure to the Andes of the mainland. Their exact geological age is unknown, but there is no improbability in supposing that they may have existed with more or less of extension since the Secondary period. In any case their fauna is in some respects a survival of that age. Lyell has truly remarked, "In the fauna of the Galapagos Islands we have a state of things very analogous to that of the Secondary period."

Like other oceanic islands, the Galapagos have no indigenous mammals, with the doubtful exception of a South American mouse; but, unlike most others, they are rich in reptiles. At the head of these stand several species of gigantic tortoises. This group of animals, so far as known, commenced its existence in the Eocene Tertiary; and in this and the Miocene period still more gigantic species existed on the continents. It has been supposed that at some such early date they reached the Galapagos from South America. Another group of Galapagan reptiles, perhaps still more remarkable, is that of iguana-like lizards of the genus *Amblyrhynchus*, which are vegetable feeders,—one of them browsing on marine weeds. They recall the great iguana-like reptiles of the European Wealden, and stand remote from all modern types. There are also snakes of two species, but these are South American forms, and may have drifted to the islands in comparatively modern times on floating trees. The birds are a curious assemblage. A few are common American species