that in the neighbouring sea there are seals, and several kinds of cetacea.*

It may be unreasonable to look for a nearer analogy between the fauna now existing in any part of the globe, and that which we can show to have prevailed when our secondary strata were deposited, because we must always recollect that a climate like that now experienced at the equator, co-existing with the unequal days and nights of European latitudes, was a state of things to which there is now no counterpart on the globe. Consequently, the type of animal and vegetable existence required for such a climate might be expected to deviate almost as widely from that now established, as do the flora and fauna of our tropical differ from those of our arctic regions.

In the Tertiary strata.—The tertiary formations were deposited when the physical geography of the northern hemisphere had been entirely altered. Large inland lakes had become numerous, as in central France and other countries. There were gulfs of the sea, into which considerable rivers emptied themselves, and where strata like those of the Paris basin were accumulated. There were also littoral formations in progress, such as are indicated by portions of the *Faluns* of the Loire, and the English *Crag*.

The proximity, therefore, of large tracts of dry land to the seas and lakes then existing, may, in a great measure, explain why the remains of land animals, so rare in the older strata, are not uncommon in these more modern deposits. Yet even these have sometimes proved entirely destitute of mammiferous relics, for years after they had become celebrated for the abundance of their fossil testacea, fish, and reptiles. Thus the calcaire grossier, a marine limestone of the district round Paris, had afforded to collectors more than 1100 species of shells, besides many zoophytes, echinodermata, and the teeth of fish, before the bones of one or two land quadrupeds were met with in the same rock. The strata called London and plastic clay in England have been studied for more than half a century, and about 400 species of shells, 50 or more of fish, besides several kinds of chelonian and saurian reptiles, were known before a single mammifer was detected. At length, in the year 1839, there were found in this formation the remains of a monkey, an opossum, a bat†, and a species of the extinct genus Hyracotherium, allied to the Pecari or hog tribe.

If we examine the strata above the London clay in England, we first meet with mammiferous remains in the Isle of Wight, in beds also belonging to the Eocene epoch, such as the remains of the Palæotherium, Anoplotherium, and other extinct quadrupeds, agreeing very closely with those first found by Cuvier, near Paris, in strata of the same age, and of similar freshwater origin.

Next in the ascending series in Great Britain we arrive at the coralline crag of Suffolk, a marine formation which has yielded three

* Darwin's Journal, chap. 19. Elements of Geol. p. 394. 2d ed. vol. ii. p. 68.

† Taylor's Annals of Nat. Hist. Nov. 1839.