

brates. Fishes are no longer the sole representatives of that department. Reptiles, Birds, and Mammals successively make their appearance, but Reptiles are preponderant particularly in the oölitic formation; on which account we have called this the *Reign of Reptiles*.

482. The carboniferous formation is the most ancient of the Secondary age. Its fauna bears, in various respects, a close analogy to that of the Palæozoic epoch, especially in its Trilobites and Mollusks.* Besides these, we meet here with the first air-breathing animals, which are Insects and Scorpions. At the same time, land-plants first make their appearance, namely, ferns of great size, club-mosses, and other fossil plants. This corroborates what has been already said concerning the intimate connection that exists, and from all times has existed, between animals and the land-plants, (399.) The class of Crustaceans has also improved during the epoch of the coal. It is no longer composed exclusively of Trilobites, but the type of horse-shoe crabs also appears, with other gigantic forms. Some of the Mollusks seem also to approach those of the Oölitic period, particularly the Bivalves.

483. In the Trias period, which immediately succeeds the Carboniferous, the fauna of the Secondary age acquires its definitive character; here the Reptiles first appear. They are huge Crocodilian animals, belonging to a peculiar order, the Rhizodonts, (*Protosaurus*, *Notosaurus*, and *Labyrinthodon*.) The well-known discoveries of Professor Hitchcock, in the red sandstone of the Connecticut, have made us acquainted

* This circumstance, in connection with the absence of Reptiles, has caused the coal-measures to be generally referred to the Palæozoic epoch. But there are other reasons which induce us to unite the carboniferous period with the secondary age, especially when considering that here the land animals first appear, whereas, in the Palæozoic age, there are only marine animals, breathing by gills; and, also, that a luxuriant terrestrial vegetation was developed at that epoch.