newer Tertiary, as the Crag, contain genera common to tropical seas, as the large sharks (*Carcharias*), and eagle-rays (*Myliobates*), &c. In the Eocene, or most ancient Tertiary, as the London and Paris basin, Monte Bolca, &c. *one*-third of the Ichthyolites belong to extinct genera. Of the Chalk fishes, *two*-thirds are of extinct genera, but related to those of the Tertiary formations. From the Oolite to the Lias, including the Wealden, the fishes constitute a natural group, not one species of which occurs in the Chalk; and all the ganoid fishes are *homocercal*. Below the Lias, a prodigious number of unknown genera and species appear; and almost all are *heterocercal*.

Thus, of the eight thousand living fishes known to naturalists, three-fourths belong to the Cycloid and Ctenoid orders, and of these no species are known below the Chalk; the other fourth is referable to the Placoids and Ganoids, of which there are comparatively but few existing species. Yet fishes of these two orders almost solely flourished during the ancient secondary formations; for below the Lias, the predominant recent orders are altogether absent. Beneath the Coal true carnivorous fishes, with trenchant teeth, are almost unknown, but omnivorous species, with either brush or obtusely conical teeth, and great sauroid fishes, are the prevailing representatives of the class. In fine, the Ichthyolites of the different formations constitute two grand groups, which have their boundary line at the base of the Cretaceous deposits. The first and most ancient,