as the vanguard of the rich flora of existing time. Nor are the changes less marked in the animal world. Such ancient and persistent types as the graptolites and trilobites had now wholly vanished. The crinoids, that grew so luxuriantly over the sea-floor in older time, now flourished in greatly diminished numbers, while the urchins, which had previously occupied a very subordinate position, took their place as the most conspicuous group of the Echinoderms. The brachiopods, which from the remotest time had filled so prominent a place among the mollusks, now rapidly diminished in number and variety. Among the cephalopods the Palæozoic type of the Orthoceratites was succeeded by the Mesozoic type of the Ammonites. But perhaps the most distinctive feature of the fauna was the variety and abundance of reptilian life. The labyrinthodont amphibians were replaced by many new orders, such as the Ichthyosaurs, Plesiosaurs, Ornithosaurs, Deinosaurs, and Crocodiles. It was in Mesozoic time also that the first mammals made their appearance in marsupial forms, which remained the highest types that were reached before the beginning of the Cainozoic periods.

The Mesozoic formations have been grouped in three great divisions, which, though first defined in Europe, are found to have their representative series of rocks and fossils all over the world. The oldest of these is the Trias or Triassic system, followed by the Jurassic and Cretaceous.

## Section i. Triassic

It has been already mentioned that the great mass of red-rocks, which in England overlie the Carboniferous system, were formerly classed together as New Red Sandstone, but are now ranged in two systems. We have con-