

Now, to return to the question of the natural limitation of Reptiles, it must be obvious that if classes differ by the manner in which the plan of their branch is carried out, or by the ways and means employed in framing their structure, we cannot suppose that animals which, like Batrachians, lay a large number of small eggs, the yolk of which is segmented in the well-known manner, to produce an embryo, without amnios and allantois, undergoing extensive metamorphosis after it is hatched, furnished with external gills, which actually perform respiratory functions, even though they may disappear at a later period of life, the skin of which is naked, etc.,¹ belong to the same class as the true Reptiles, the skin of which is covered with horny scales, which lay few, and comparatively large eggs surrounded with a shell, the yolk of which undergoes only a superficial segmentation, and from which is formed an embryo inclosed in an amnios, and afterwards in an allantois, and which, after being hatched, undergoes no marked transformation, etc. The conclusion that Batrachians and Reptiles constitute two distinct classes, the first of which is indeed more closely allied to Fishes than to the true Reptiles, is not only of great zoölogical importance, but has also the most direct bearing upon the question of the order of succession of Vertebrates in geological times, and cannot fail to give a new interest to our investigations upon this subject, as well as to increase the precision of our knowledge respecting the first appearance of Reptiles upon earth.

It will indeed be obvious at once, that if all the so-called Reptiles which have been mentioned as occurring in the carboniferous beds and even in strata below the coal, belong to the class of Batrachians and not to that of genuine Reptiles, the inference to be drawn from the presence of such animals during these ancient geological periods cannot be the same, and instead of leading to the assumption that conditions of existence similar to those which sustain our Reptiles prevailed as far back as these remains are found, we shall only have the evidence that the conditions essential to the life of Batrachians, but not to that of true Reptiles, were established then.

After this separation of the Batrachians from the true Reptiles, we have only three orders left in the class of Reptiles proper: the Ophidians, the Saurians, and the Chelonians. It would lead me too far from my immediate subject, were I to examine here, whether this is the most natural subdivision of Reptiles into orders. I shall limit myself, therefore, to the consideration of the Chelonians alone, remarking only, that whether this division be natural or not, whether we include the Crocodilians in the same order as the true Lizards, or whether we regard them with their fossil representatives as a distinct order, or whether we consider the

¹ See further details in any anatomical text-book.