

system is intermediate between fishes and reptiles. The extinct Labyrinthodont, while possessing many distinct batrachian affinities, was reptilian in its crocodile-like skull, and the protective bony plates upon the thorax and flanks. In the teeth is found, however, the peculiar labyrinthine structure seen in some Placoderm fishes; and the sculptured plates of the *Ganocephala* furnish a resemblance to bony scaled Ganoids. The structure of Amphibians is on the whole, so reptilian that they were, for many years, merged in the reptile-class. Now Amphibians existed, as far as we know, before the reptile-type had been introduced. All their reptilian characters therefore, were prophetic of a class which was yet non-existent. On the contrary, they appeared when the reign of fishes was passing away. All their ichthyic characters, therefore, were retrospective.

Take next, the wide-ranging class of Reptiles. During the age of its dominance, various ordinal divisions exemplified various relations to the future and the past. While the concavo-convex vertebra was proper to reptiles, the sea-saurians had bi-concave vertebræ—a reminiscence of fishes. Other reptiles had the teeth soldered to the jaws as in fishes. Some reptiles with socketed teeth, however, had bi-concave vertebræ. The Ichthyosaurs, with fish-like vertebræ and jaws, had crocodilian teeth and whale-like paddles. It looked forward toward the mammalian type. Some of the Dinosaurs, also, were prophetic of land-mammals in their short, compact bodies, while their bi-pedal attitude anticipated both mammals and birds. A more explicit anticipation of birds was revealed in the composition of the digits and the structures of the tarsus and pelvis. The Pterosaurs were prophetic of bats in their leathery wings supported by elongated digits. They foreshadowed birds, not alone in the flying function, but in their bird-like scapula, coracoid, and other structures. In one genus the tips of the mandibles were without teeth; and in the American Pterosaurs, the mandibles were completely destitute of teeth, while the tail also, is reduced to a few vertebræ, and the head is distinctly bird-like.

The gradation of reptiles towards birds brings us to facts