

broader and show very different structure from that seen in the other two orders. Probably the Fish Dragons and Serpent Dragons developed as two diverging branches out of the Primæval Dragons; but it is also possible that the Plesiosauria alone originated out of the Simosauria, and that the Ichthyosauria were lower off-shoots from the common stock. At all events, they must all be directly, or indirectly derived from the Selachii, or Primæval fish.

The succeeding classes of Vertebrata, the *Amphibia* and the *Amniota* (Reptiles, Birds, and Mammals), owing to the characteristic structure which they all exhibit of five toes to each foot, may all be derived from a common primary form, which originated from the Selachii, and which possessed five toes on each of its four limbs. When we find a less number of toes than five, we can show that the missing ones must have been lost in the course of time by adaptation. The oldest known Vertebrata with five toes are the *Batrachias* (Amphibia). We divide this class into two sub-classes, namely, mailed Batrachians and naked Batrachians, the first of which is distinguished by the body being covered with bony plates or scales.

The first and elder sub-class of Amphibia consists of the *Mailed Batrachians* (Phractamphibia), the oldest land living Vertebrata of which fossil remains exist. Well-preserved fossil remains of them occur in the coal, especially of those with *Enamelled heads* (Ganocephala), which are most closely allied to fish, namely, the Archegosaurus of Saarbruck, and the Dendrerpeton of North America. There then follow at a later period the gigantic *Labyrinth-toothed animals* (Labyrinthodonta), which are represented in the Permian system by Zygosaurus, but at a later