

*Pair-hoofed animals* (Artiodactyla), comprises those hoofed animals in which the middle (third) and fourth toe of the foot are almost equally developed, so that the space between the two forms the central line of the entire foot. The order is divided into two sub-orders—the Pig-shaped and the Cud-chewing, or Ruminating. The *Pig-shaped* (Chœromorpha) comprise in the first place the other branch of Primary-Hoofed-animals, the *Anoplotheria*, which we consider as the common primary form of all Pair-hoofed animals, or Artiodactyla (Dichobune, etc.) Out of the *Anoplotheria* arose, as two diverging branches, the primæval swine, or *Anthracotheria*, on the one hand, forming the transition to swine and river-horses, and the *Xiphodonta* on the other hand, forming the transition to Ruminating animals. The oldest *Ruminating animals* (Ruminantia) are the Primæval Stags, or *Dremotheria*, out of which, possibly, the stag-shaped (*Elaphia*), the hollow-horned (*Cavicornia*), and camels (*Tylopoda*), have developed as three diverging branches. Yet these latter are, in many respects, more allied to the Odd-hoofs than to the genuine Pair-hoofs. The accompanying systematic survey on p. 252, will show how the numerous families of Hoofed animals are grouped, in correspondence with this genealogical hypothesis.

It is probable that the remarkable legion of *Whales* (Cetacea) originated out of Hoofed animals, which accustomed themselves exclusively to an aquatic life, and thereby became transformed into the shape of fish. Although these animals seem externally very like many genuine Fish, yet they are, as even Aristotle perceived, genuine Mammals. By their whole internal structure—in so far as it has not become changed by adaptation to an aquatic life—they, of all known