

grace of motion, fleetness and strength which characterize one or more species of the group, and which combination of qualities is presented in equal perfection in no other Herbivore. The type, therefore, may rightly claim the first place in its grand division, and not a subordinate one, either between Tapirs and Rhinoceroses or Hogs, or below Goats and Oxen.

The *Macrauchenia*, according to Owen, was much like a Ruminant in its *legs*, although *imparidigitate*, and near the Camel in its *neck*, while it had *probably* (the head is yet unknown) no Tapir-like proboscis. The radius and ulna were united, and so also the tibia and fibula. Its place in the system may be, therefore, along side of the Equids, or the *imparidigitate* *Sthenomeres*. If, however, the animal had a proboscis, the species would fall among the Tapirideans and represent an inferior long-amplificate subdivision. The term *Solipeds* or *Solidungulates*, might well be replaced by *Equideans*, as the existence of a *solitary* hoofed toe is not an essential characteristic of the group.

2. The *Ruminants* are naturally divided into two groups.—

(1.) The *Cornigers* or typical species.—These are (a) furnished with horns (whence the name applied to them) at least in the males. They are (b) *frontiferient*, that is, strike with the forehead in attack. (c.) The foot has great compactness, the two principal toes (normally the *third* and *fourth*) being so large, and so well hoofed, that the animal walks upon them; the hoofs are flat on the inner side and fit well together, so as to look and act much like one cloven hoof. (d.) The two posterior toes (*second* and *fifth*) are too short to touch the ground, and are sometimes altogether wanting. (e.) Two metacarpals, and also two metatarsals, are, with a rare exception, coalesced into a single "cannon-bone"; also, the scaphoid and cuboid bones, at the base of the cannon-bone, are united. These particular characters are here enumerated in order to exhibit the contrast between this type and that of the *Nudifronts*.

The two families of Cervids and Antilopids, mentioned in the Synopsis, page 169, are the same in limits as those usually so named, except that the Camelopard is excluded. The Camelopardalid is the special long-amplificate, or Heron-like group, under the Corniger type. The horns are persistent, as in the Antilopids; but instead of a corneous sheath, they have for a covering only the hairy skin. In this respect and, further, in their extreme long-amplification, in the young animal's having horns at birth, and in their using the hind-legs in kicking as the principal means of defense, like the Horse, (and not merely as the occasional, like many Ruminants,) they diverge from the other Cornigers and rightly constitute a separate family, and one *hypotypic* in grade. It is stated that the males sometimes make use of their horns in attack; and one female at the Zoological Gardens, London, is said to have driven her horns through an