

*Pecora*; the *Pachyderms* include some of the *Bruta* and the *Belluce*, comprehending also extinct animals, as *Anoplotherium* and *Palæotherium*.

But the two orders of Hoofed Animals, the *Pachyderms* and the *Ruminants*, form a group which is held by Mr. Owen to admit of a better separation, on the ground of a character already pointed out by Cuvier; namely, as to whether they are *two-toed* or *three-toed*. According to this view, the Horse is connected with the Tapir, the *Palæotherium*, and the Rhinoceros, not only by his teeth, but by his feet, for he has really three digits. And Cuvier notices that in the two-toed or even-toed *Pachyderms*, the astragalus bone has its face divided into two equal parts by a ridge; while in the uneven-toed *pachyderms* it has a narrow cuboid face. Mr. Owen has adopted this division of *Pachyderms* and *Ruminants*, giving the names *artiiodactyla* and *perissodactyla* to the two groups; the former including the Ox, Hog, Peccary, Hippopotamus, &c.; the latter comprehending the Horse, Tapir, Rhinoceros, Hyrax, &c. And thus the *Ruminants* take their place as a subordinate group of the great natural even-toed Division of the Hoofed Section of Mammals; and the Horse is widely separated from them, inasmuch as he belongs to the odd-toed division.<sup>2</sup>

As we have seen, these modern classifications are so constructed as to include extinct as well as living species of animals; and indeed the species which have been discovered in a fossil state have tended to fill up the gaps in the series of zoological forms which had marred the systems of modern zoologists. This has been the case with the division of which we are speaking.

Mr. Owen had established two genera of extinct Herbivorous Animals, on the strength of fossil remains brought from South America: —*Toxodon*, and *Nesodon*. In a recent communication to the Royal Society<sup>3</sup> he has considered the bearing of these genera upon the divisions of odd-toed and even-toed animals. He had already been led to the opinion that the three sections, *Proboscidea*, *Perissodactyla*, and *Artiodactyla*, formed a natural division of *Ungulata*; and he is now led to think that this division implies another group, “a distinct division of the *Ungulata*, of equal value, if not with the *Perissodactyla* and *Artiodactyla*, at least with the *Proboscidea*.” This group he proposes to call *Toxodonta*.

<sup>2</sup> Owen, *Odontography*.

<sup>3</sup> *Phil. Trans.*, 1853.