

the primary centre (or that of the brain) is very remote from the anterior extremity—thus approximating to the position it has in the Radiates, and showing a low grade of decephalization. See on this point, Art. I, p. 328, and beyond, p. 179.

Mutilates consequently differ from aquatic Herbivores fundamentally in (a) being *multiply* structures, as manifested in their limbs and teeth, as well as in the less important fact of great length of body behind; and also (b) in being more *elementalized* structures, as shown in the reptile-like teeth. The type is eminently, therefore, a multiply and elementalized type, and thus stands apart from that of the Sirenians.³

2. *Prosthenic, metasthenic and urosthentic distinctions among Herbivores.*—The distinctions, *prosthenic*, *metasthenic* and *urosthentic* appear to be an important basis of subdivisions under the Herbivorous type.

The *urosthentic* species (or those using the caudal extremity for locomotion) are the *Sirenians*, as the Dugong and Manatus.

The distinction of *prosthenic* and *metasthenic* is manifested among the other Herbivores in two ways: (1) a higher or *primary*, in the general structure; and (2) an inferior or *secondary*, in the extremities of the limbs.

(1.) *In the general structure.*—Under this method, the *prosthenic* species are those in which the fore-limbs are the stronger pair, and the *metasthenic*, those in which the hind-limbs are the stronger. The *former* include the Proboscideans, Rhinoceroses, Tapirs, Hogs and Hippopotamids. The Hog is particularly strong in the neck and fore-quarters. It is well known that a fatted hog often loses the use of its hind-limbs from overgrowth, and not of the fore-limbs, although the fore-limbs carry not only their share of a body nearly equally divided between the limbs, but also the heavily weighted head.

The *metasthenic* species are the Solipeds and the Ruminants, in which the hind-limbs are well known to be the strong pair. The Horse and Camelopard use their hind-limbs for self-defense, and so do also, to some extent, many of the Ruminants. Among the large Mammals, strength in the posterior limbs is an essential requisite for a draught-animal; and not less so for a mountain-climber, especially when the fore-limbs are not prehensile; and, consequently, nearly all the larger mountain-climbing animals, frequenting precipitous heights, are species of Ruminants.⁴

³ This definition excludes not only the Sirenians but also the Zeuglodonts, which have been shown to be Carnivores, with normal teeth and nostrils, although very elongate in body and *urosthentic*.

⁴ For a draught-animal something more is needed than mere strength of hind-limbs, and consequently all of these metasthenic species are not good for this kind of service. There may be too great length of limb,—too little real strength for the long and steady pull which it requires, and which is very different from the mere