

indicative, each, of inferiority of grade. They are feeble in the head, and have no use for the forehead in attack or defense; they are weak as to means of defense of any kind; they have a lax condition of the extremities; they have a more complete and regular series of teeth, but as a result of a more diffused state of the systemic force, or less systemic control.

C. Sirenians.

The distinctions of the Sirenians have already been sufficiently indicated (p. 169).

In conclusion, the writer may here state that he does not look upon the classification which has been presented, as in all points that to which *beyond question* the right application of the principle of cephalization leads; but only as that which, as far as he now understands the facts and the principle, appears to him to be correct to nature.

D. Dynamical considerations.

1. *Amplification*.—On page 165 it is shown that in the skeleton of the long-amplificate Herbivores, the head and limbs are both elongated, although unequally; and that the elongation is little or none in the basal portion of these parts, while large in the rest, and especially toward the extremities of both the jaws and limbs.

On page 174, it is likewise shown that a relaxation of the parts in the extremities of the limbs is concurrent with a relaxing also of the elements of the jaws.

Thus the head and the limbs, parts alike circumferential, undergo analogous changes under similar conditions—the amplification in the *head* increasing from the basal portion of the skull toward the extremity of the jaws; and that in the *limbs* increasing from the body toward the extremities of these limbs.

Now it is to be noted that, while the head and the limbs diminish in amplification toward their basal portions, they are separated in the same species by a *long-amplificate neck*. It seems to follow, therefore, that the head is one centre of amplification, and the body another; or, in other words, that there are two distinct centres of amplification, a *cephalic* and a *thoracic*, the former the *primary*.

The question may be asked, whether the neck, in its amplification, should be considered as subordinate to the cephalic, or to the thoracic, centre, or to both equally. In reply, it is to be observed that the amplification in the case of the neck accords in amount much more nearly with that in the limbs than with that in the head. Moreover, short limbs and a short neck go together (as in the natatorial Herbivores and Mutilates), even