

and descend less below the carapace; the fourth pair of bony plates is narrower at its front end, and narrows continually thence backward, its sides being straight, and not curved outward, as in the first group; and the sutures of the first and fourth pairs, with the second and third, are but slightly movable in the adult, and in some cases not at all so. Thus the spaces around the free edges of the plastron are here larger than in the first group; and besides, the protection from the shield is still less on account of the slight movability of the parts of the plastron upon one another. There are, besides, certain other tendencies that become important in connection with their constant characters. In Cinosternoids the tendency is to a more regularly arched carapace; in Ozothecoids, to a sharp ridge along the back, the sides spreading wide apart downward, so that the body is generally broader between the outer edges, but less deep below them, than in the first group. The scales on the plastron of the Cinosternoids are well developed and well defined, and cover its whole surface; but in the Ozothecoids they are more irregular, and often separated by large, scaleless spaces between them; and the fourth pair of bony plates reaches forward on to the third pair, which is never the case in the Cinosternoids, for there it would interfere with the motion of the hinge. The scales of the shield differ also; in Ozothecoids they have a marked tendency to overlap those further back, the centre of growth receding gradually backward of the centre of figure, as in the Chelonioids, and some exhibit even distinct traces of imbrication. In both groups there are two or more horny papillæ under the chin. The principal differences between these groups all go to bring the body more under the protection of the shield in Cinosternoids than in Ozothecoids, and to give the legs freer motion in the latter than in the former. These characters are easily traced to corresponding habits of these animals; for, at least as far as we are acquainted with the members of these groups, the Cinosternoids resort, in danger, more to the shield, the Ozothecoids, to flight; the former live more on land, the latter more in deep water, and are also the more shy, and the quicker in their motions. These characters, thus connected with the general form, and impressing upon it such decided tendencies, are clearly sub-family characters, and the groups themselves are sub-families.

Within the limits of each of these sub-families of Cinosternoids, minor groups, containing one or more species, may be distinguished, that differ in the structure of the jaws and the parts dependent upon them, in the way of taking food, and, to some extent, in the kind of food sought; in short, in the voluntary organs of nutrition, and the parts concerned in it. At first sight, these groups, based on one set of organs, may seem arbitrary; but if it is remembered to what extent the acts of animals are directed to getting food, how far their sensations are gratified by this act, and how largely their instincts are concerned in it, it will