

series; only that de Blainville inverts the order of Lamarck, beginning with the highest animals and ending with the lowest. With that idea is blended, to some extent, the view of Cuvier, that animals are framed upon different plans of structure; but so imperfectly has this view taken hold of de Blainville, that instead of recognizing at the outset these great plans, he allows the external form to be the leading idea upon which his primary divisions are founded, and thus he divides the animal kingdom into three sub-kingdoms: the first, including his Artiozoaria, with a bilateral form; the second, his Actinozoaria, with a radiated form, and the third, his Heterozoaria, with an irregular form (the Sponges, Infusoria, and Corallines.) The plan of structure is only introduced as a secondary consideration, upon which he establishes four types among the Artiozoaria: 1st. The Osteozoaria, corresponding to Cuvier's Vertebrata; 2d. The Entomozoaria, corresponding to Cuvier's Articulata; 3d. The Malentozoaria, which are a very artificial group, suggested only by the necessity of establishing a transition between the Articulata and Mollusca; 4th. The Malacozoaria, corresponding to Cuvier's Mollusca. The second sub-kingdom, Actinozoaria, corresponds to Cuvier's Radiata, while the third sub-kingdom, Heterozoaria, contains organized beings which for the most part do not belong to the animal kingdom. Such at least are his Spongiaria and Dendrolitharia, whilst his Monodaria answer to the old class of Infusoria, about which enough has already been said above. It is evident, that what is correct in this general arrangement is borrowed from Cuvier; but it is only justice to de Blainville to say, that in the limitation and arrangement of the classes, he has introduced some valuable improvements. Among Vertebrata, for instance, he has, for the first time, distinguished the class of Amphibia from the true Reptiles. He was also the first to remove the Intestinal Worms from among the Radiata to the Articulata; but the establishment of a distinct type for the Cirripedia and Chitons was a very mistaken conception. Notwithstanding some structural peculiarities, the Chitons are built essentially upon the same plan as the Mollusks of the class Gasteropoda, and the investigations, made not long after the publication of de Blainville's system, have left no doubt that Cirripedia are genuine Crustacea. The supposed transition between Articulata and Mollusks, which de Blainville attempted to establish with his type of Malentozoaria, certainly does not exist in nature.

If we apply to the classes of de Blainville the test introduced in the preceding chapter, it will be obvious that his Decapoda, Heteropoda, and Tetracapoda partake more of the character of orders than of that of classes, whilst among Mollusks, his class Cephalophora certainly includes two classes, as he has himself acknowledged in his later works. Among Radiata his classes Zoantharia, Polypiarina, and Zoophytaria partake again of the character of orders and not of those of classes. One great objection to the system of de Blainville is, the useless introduction of so