

When we consider the zoölogical systems of the past century, that of Linnæus, for instance, and compare them with more recent ones, that of Cuvier, for example, we cannot overlook the fact, that even when discoveries have added little to our knowledge, the subject is treated in a different manner; not merely in consequence of the more extensive information respecting the internal structure of animals, but also respecting the gradation of the higher groups.

Linnæus had no divisions of a higher order than classes. Cuvier introduced, for the first time, four great divisions, which he called "*embranchemens*" or branches, under which he arranged his classes, of which he admitted three times as many as Linnæus had done.

Again, Linnæus divides his classes into orders; next, he introduces genera, and finally, species; and this he does systematically in the same gradation through all classes, so that each of his six classes is subdivided into orders, and these into genera with their species. Of families, as now understood, Linnæus knows nothing.

The classification of Cuvier presents no such regularity in its framework. In some classes he proceeds, immediately after presenting their characteristics, to the enumeration of the genera they contain, without grouping them either into orders or families. In other classes, he admits orders under the head of the class, and then proceeds to the characteristics of the genera, while in others still, he admits under the class not only orders and families, placing always the family in a subordinate position to the order, but also a number of secondary divisions which he calls sections, divisions, tribes, etc., before he reaches the genera and species. With reference to the genera again, we find marked discrepancies in different classes. Sometimes a genus is to him an extensive group of species, widely differing one from the other, and of such genera he speaks as "*grands genres*;" others are limited in their extent, and contain homogeneous species without farther subdivisions, while still others are subdivided into what he calls sub-genera, and this is usually the case with his "*great genera*."

The gradation of divisions with Cuvier varies then with his classes, some classes containing only genera and species, and neither orders nor families nor any other subdivision. Others contain orders, families, and genera, and besides these, a variety of subdivisions of the most diversified extent and significance. This remarkable inequality between all the divisions of Cuvier is, no doubt, partly owing to the state of Zoölogy and of zoölogical museums at the time he wrote, and to his determination to admit into his work only such representatives of the animal kingdom as he could to a greater or less extent examine anatomically for himself; but it is also partly to be ascribed to his conviction, often expressed, that there is no such uniformity or regular serial gradation among animals as many naturalists attempted to introduce into their classifications.