

Linnæus. The artificial system differs essentially from the natural one, in the fact that it does not make the whole organization and the internal structure (depending upon the blood relationship) the basis of classification, but only employs individual, and for the most part external, characteristics, which readily strike the eye. Thus Linnæus distinguished his twenty-four classes of the vegetable kingdom principally by the number, formation, and combination of the stamens. In like manner he distinguished six classes in the animal kingdom principally by the nature of the heart and blood. These six classes were: (1) Mammals; (2) Birds; (3) Amphibious Animals; (4) Fishes; (5) Insects; and (6) Worms.

But these six animal classes of Linnæus are by no means of equal value, and it was an important advance when, at the end of the last century, Lamarck comprised the first four classes as vertebrate animals (*Vertebrata*), and put them in contrast with the remaining animals (the insects and worms of Linnæus), of which he made a second main division—the invertebrate animals (*Invertebrata*). In reality Lamarck thus agreed with Aristotle, the father of Natural History, who had distinguished these two main groups, and called the former *blood-bearing animals*, the latter *bloodless animals*.

The next important progress towards a natural system of the animal kingdom was made some decades later by two most illustrious zoologists, Carl Ernst Bär and George Cuvier. As has already been remarked, they established, almost simultaneously and independently of one another, the proposition that it was necessary to distinguish several completely distinct main groups in the animal kingdom, each of