

distribution of the events in the history of botany was founded, if Cuvier's representation of the history of ichthyology offers to us obviously a distribution almost identical.

We shall find that this is so;—that we have, in zoology as in botany, a period of unsystematic knowledge; a period of misapplied erudition; an epoch of the discovery of fixed characters; a period in which many systems were put forward; a struggle of an artificial and a natural method; and a gradual tendency of the natural method to a manifestly physiological character. A few references to Cuvier's history will enable us to illustrate these and other analogies.

Period of Unsystematic Knowledge.—It would be easy to collect a number of the fabulous stories of early times, which formed a portion of the *imaginary knowledge* of men concerning animals as well as plants. But passing over these, we come to a long period and a great collection of writers, who, in various ways, and with various degrees of merit, contributed to augment the knowledge which existed concerning fish, while as yet there was hardly ever any attempt at a classification of that province of the animal kingdom. Among these writers, Aristotle is by far the most important. Indeed he carried on his zoological researches under advantages which rarely fall to the lot of the naturalist; if it be true, as Athenæus and Pliny state,¹ that Alexander gave him sums which amounted to nine hundred talents, to enable him to collect materials for his history of animals, and put at his disposal several thousands of men to be employed in hunting, fishing, and procuring information for him. The works of his on Natural History which remain to us are, nine Books *Of the History of Animals*; four, *On the Parts of Animals*; five, *On the Generation of Animals*; one, *On the Going of Animals*; one, *Of the Sensations, and the Organs of them*; one, *On Sleeping and Waking*; one, *On the Motion of Animals*; one, *On the Length and Shortness of Life*; one, *On Youth and Old Age*; one, *On Life and Death*; one, *On Respiration*. The knowledge of the external and internal conformation of animals, their habits, instincts, and uses, which Aristotle displays in these works, is spoken of as something wonderful even to the naturalists of our own time. And he may be taken as a sufficient representative of the whole of the period of which we speak; for he is, says Cuvier,² not only the first, but the only one of the ancients who has treated of the natural history of fishes (the province to which

¹ Cuv. *Hist. Nat. des Poissons*, i. 13.

² Cuv. p. 18.