

and recognized, and familiarly and successfully applied by botanists. And it will be apparent, on reflection, that though *symmetry* is a notion which applies to inorganic as well as to organic things, and is, in fact, a conception of certain relations of space and position, such *development* and *metamorphosis* as are here spoken of, are ideas entirely different from any of those to which the physical sciences have led us in our previous survey; and are, in short, genuine *organical* or *physiological* ideas;—real elements of the philosophy of *life*.

We must, however imperfectly, endeavor to trace the application of this idea in the other great department of the world of life; we must follow the history of Animal Morphology.

CHAPTER VII.

PROGRESS OF ANIMAL MORPHOLOGY.

Sect. 1.—Rise of Comparative Anatomy.

THE most general and constant relations of the form of the organs, both in plants and animals, are the most natural grounds of classification. Hence the first scientific classifications of animals are the first steps in animal morphology. At first, a *zoology* was constructed by arranging animals, as plants were at first arranged, according to their external parts. But in the course of the researches of the anatomists of the seventeenth century, it was seen that the internal structure of animals offered resemblances and transitions of a far more coherent and philosophical kind, and the Science of *Comparative Anatomy* rose into favor and importance. Among the main cultivators of this science¹ at the period just mentioned, we find Francis Redi, of Arezzo; Guichard-Joseph Duvernay, who was for sixty years Professor of Anatomy at the Jardin du Roi at Paris, and during this lapse of time had for his pupils almost all the greatest anatomists of the greater part of the eighteenth century; Nehemiah Grew, secretary to the Royal Society of London, whose *Anatomy of Plants* we have already noticed.

But Comparative Anatomy, which had been cultivated with ardor

¹ Cuv. *Leçons sur l'Hist. des Sc. Nat.* 414, 420.