anatomy and ontogeny. Besides these, palæontology also throws much valuable light upon the historical succession of many of the groups. From numerous facts in comparative anatomy, we may, in the first place, infer the *common origin of all those animals which belong to one of the seven "types."* For in spite of all the variety in the external form developed within each of these types, the essential relative position of the parts of the body which determines the type, is so constant, and agrees so completely in all the members of every type, that on account of their relations of form alone we are obliged to unite them, in the natural system, into a single main group. But we must certainly conclude, moreover, that this conjunction also has its expression in the pedigree of the animal kingdom. For the true cause of the intimate agreement in structure can only be the actual blood relationship. Hence we may, without further discussion, lay down the important proposition that all animals belonging to one and the same circle or type must be descended from one and the same original primary form. In other words, the idea of the circle or type, as it is employed in zoology since Bär and Cuvier's time to designate the few principal main groups or "sub-kingdoms" of the animal kingdoms, coincides with the idea of "tribe" or "phylum," as employed by the Theory of Descent.

If, then, we can trace all the varieties of animal forms to these seven fundamental forms, the following question next presents itself to us as a second phylogenetic problem—Where do these seven animal tribes come from? Are they seven original primary forms of an entirely independent origin, or are they also distantly related by blood to one another?