

nostome are so far distinct from the main cavity, that they only communicate with it through the channels extending along the centre of these folds; while in the naked-eyed *Medusæ* the actinostome opens broadly into the main cavity. The chymiferous tubes arise from the upper part of the sides of the main cavity.

It thus appears that the *Discophoræ* proper have a far more complicated structure than the naked-eyed *Medusæ*, and that, in a natural classification, they cannot therefore be united into one and the same order, as has thus far been done by most naturalists. Moreover, the *Discophoræ* resemble one another very much in their general appearance and in their motions, which are effected by a slow alternate expansion and contraction of the disc.

The *Hydroids*, as the lowest order of the class of *Acalephs*, are far more diversified among themselves than either the *Ctenophoræ* or *Discophoræ*.¹ In the first place we find among them simple *Hydroids*, in the next place more or less medusoid *Hydroids*, then communities of variously combined individuals with more or less medusoid or hydroid characters; and among these communities there are

¹ It is a striking fact, conflicting with all pre-conceived ideas, that throughout the animal kingdom, the lower types, in every class, are far more diversified than their higher representatives. It is so among *Polyps*, if the *Actinoids* are inferior to the *Halcyonoids*; it is so again among the *Actinoids*, if the *Madrepores* are the highest among them. It is so among the *Acalephs*, if the *Ctenophoræ* are the highest and the *Hydroids* the lowest. It is so among *Echinoderms*, if the *Holothurians* stand highest and the *Crinoids* lowest. It is so among *Acephala*, if the *Bryozoa* belong to that class. It is so among *Gasteropods*, if the *Pulmonates* are superior to the *Branchiates*. It is so among *Cephalopods*, if the *Dibranchiates* deserve to be placed above the *Tetrabranchiates*. It is so among *Worms*, if the *Helminths* belong to the same class with the *Annelids*. It is so among *Crustacea*, if *Rotifera* and *Eutomostraca* are their lowest representatives. It is so among *Insects*, if the *Myriapods* and *Arachnids* are united into one class with the *Insects* proper; and it would still be so if the winged *Insects* were considered as a class by themselves, for the mandibulate *Insects* are more numerous and more diversified than the sucking *Insects*, and those which undergo the most complete metamorphoses

fewer and less diversified than those whose metamorphoses are less complete. It is so among *Fishes*, if the bony *Fishes* are inferior to the *Selachians*. It is so among *Amphibians*, if the caudate *Amphibians* are inferior to the *Frogs* and *Toads*. It is so among *Reptiles* proper, if the *Chelonians* deserve the highest, and the *Ophidians* the lowest, place in that class. It is so among *Birds*, if the *Palmipeds* are their lowest representatives. It is so among *Mammalia*, if we contrast the *Marsupials* with the higher *Mammalia*; or if, among the latter, we compare the *Rodents* with the *Human* family. Of course, this greater diversity does not involve respectively greater differences among the lower representatives of any class when compared to one another, than among the highest; since their very inferiority, combined with great diversity, renders the possible amount of difference among the many lower ones less than among the fewer more highly organized ones. This very extraordinary diversity among the lowest types of all the classes of the animal kingdom stands in flagrant contradiction with Darwin's theory of the origin of species, according to which the lowest types should gradually give way to higher and higher types, in consequence of the struggle for life.