

of their parts, and their attitudes, will be unavoidable, and the same motion in two different types of this order might be designated by contrary expressions. The only way of avoiding these difficulties is to adopt a nomenclature in accordance with the general homologies of these animals, and to keep in view the fact that the normal attitude of all the Radiates is that in which their main axis is placed in a vertical position. With this understanding we may then say, that, when at rest, *Bolina* and allied genera stand upright, with the actinostome turned downward; that *Pleurobrachia* also stands upright, but with the actinostome turned upward; that *Idyia* lies nearly horizontally, with the actinostome slanting slightly downward; and that *Bolina* and *Idyia* move with the abactinal pole forward, while *Pleurobrachia* moves with the actinal pole forward.

Next, we have to distinguish two other diameters, at right angles with one another and with the main vertical axis. In order correctly to appreciate the peculiar symmetry of the Ctenophoræ, it must be remembered, in the first place, that their body is made up of eight spheromeres, arranged in pairs on opposite sides of an imaginary plane dividing the whole structure into equal halves, and passing through the longer diameter of the circumscribed area of the abactinal pole, as well as through the longer diameter of the actinostome and of the digestive cavity; and, in the second place, that there are two or more distinct radiating tubes, opposite one another, and respectively intermediate between two rows of locomotive flappers, trending in the direction of another imaginary plane dividing also the whole structure into equal halves, but at right angles with the first. Thus the body of the Ctenophoræ may be divided into equal halves in two opposite directions; but the greatest diameter of these two sets of halves is not equal: that which passes, at right angles with the main axis, through the longer diameter of the actinostome and of the circumscribed area, is either greater or smaller than that which passes through the two intermediate radiating tubes, and the preponderance of the one over the other seems to be typical in different groups of Ctenophoræ. In *Idyia*, the transverse diameter passing through the intermediate radiating tubes is much shorter than that which coincides with the longer diameter of the actinostome; while in *Pleurobrachia* the relations are reversed, the transverse diameter passing through the intermediate radiating tubes being longer than the other, except that in this type the difference between the length of these two diameters is not so marked. *Bolina*, again, coincides with *Idyia* as to the respective length of its transverse diameters, and exhibits the same disproportion between the two.

We have thus, unmistakably, two different kinds of transverse diameters, though in different representatives of the order one or the other of the two kinds may be respectively the longer or the shorter. This distinction once recognized, the question arises how far one of these diameters may be considered as lateral, and