

a large cavity subdivided only by partitions, without definite circulatory tubes, but along which the fluids are nevertheless circulated up and down and into the tentacles, and discharged either in a retrograde current through the stomach and mouth, or through the tentacles and lateral pores, when such exist. In Discoid Medusæ a similar circulation takes place, but without openings either in the periphery or opposite the mouth; here, the fluid accumulated in the digestive cavity is circulated through tubes into the periphery and around it, and the refuse matters, retracing their course, are emptied through the mouth. No Medusæ have peripheric openings of their chymiferous system through which the refuse matters may be discharged, as Ehrenberg maintains; but in all of them, as well as in Polypi, the whole digestive apparatus is in direct broad communication with the circulatory apparatus. The fluid circulated is simply chyme mixed with water, and carried to all parts through the chymiferous tubes. In Medusæ proper this fluid retraces its course, and may be discharged through the mouth. In some Polyps it is also discharged through the mouth only, while in others it may also find an outlet through the tip of the tentacles and through the lateral pores of the spherosome; but in Ctenophoræ it is discharged through the openings of the funnel. These animals never have a continuous alimentary canal with a simple anterior and posterior opening, nor a distinct circulatory system deriving its fluid through lymphatics from the alimentary cavity; but all have two closely connected systems broadly communicating with one another, through which alimentation takes place, one of which presides chiefly over the function of digestion, while the other circulates the whole mass of digested food—that is, chyme mixed with water—throughout the system. It is therefore proper, in describing these organs, to avoid any names which may suggest an identity with those of other animals with which they are only analogous. For this reason I have adopted the name of cœliac cavity for the digestive sac, and called funnel the central chymiferous cavity; and its branching tubes, chymiferous tubes or chymiferous vessels. The circulation which takes place in this system of tubes is not to be homologized with a blood circulation: it is only a chyme circulation, the fluid moving to and fro in opposite halves of the body by their alternate contractions.

If we next consider the oblong area, I must first correct a mistake I made in my paper upon Beroid Medusæ, in which I stated that the space circumscribed by its outline is a hollow space, extending forward and backward from the two cloacal bulbs, in a direct prolongation of the cavity of the bulbs. I must have been misled by an oblique view of the funnel, producing the appearance of a circulation in the area itself. The ridge which circumscribes this area is very definite, and, though smooth, slightly prominent upon the surface, so that the circumscribed area is really a broad, shallow depression, covered with superficial vibratile