

animals, which they digest very rapidly. I have seen an *Idyia* swallow a *Bolina* nearly as large as itself and consume it in half an hour, rejecting the more consistent parts, such as the locomotive flappers, etc. During the process of digestion the funnel is greatly distended, and the chymiferous tubes swell enormously, so that their diameter much exceeds the width of the rows of locomotive flappers, and an active circulation may be traced through the whole system, when even the most minute branches appear gorged with fluid. Undoubtedly this fluid is subservient to the purpose of alimentation; and the whole body enlarges, and, when full-grown, derives its maintenance, through what it assimilates out of it. But when considering its relations to the whole organism of the Ctenophore and the part it plays in their general economy, it should not be overlooked that it is neither blood, nor in any way comparable to the fluid circulating in the vascular system of either the Vertebrates, the Articulates, or the Mollusks, but simply a fluid elaborated in the digestive cavity by a disintegration of the food, with which a large quantity of water is mixed, and then, after the coarser parts have been rejected through the mouth, directly poured into another cavity, the funnel, whence it passes into the radiating tubes, parts of it being from time to time discharged through the two openings near the abactinal pole.

In consequence of these very peculiar combinations, it is not easy to ascertain what these openings are. Some anatomists unhesitatingly call them anal apertures; but the anus, throughout the animal kingdom, is the posterior opening of the alimentary canal, while here we have two openings in the central part of a system which is distinct from the digestive cavity, and through which nutritive fluid is circulated. These openings cannot, therefore, be identified with anal apertures, even though the nutritive mass be only chyme, and neither chyle nor blood; but ought to be considered as a special structural combination peculiar to this type of the animal kingdom. It cannot be strictly homologous to any structure among the higher types of animals; and the nearest resemblance which it has to the structural complications of the Vertebrates is a mere analogy, and may be thus expressed: Supposing the alimentary canal and the lymphatic vessels arising from its wall to be in direct and open communication with the veins which carry the products of digestion to the heart, and through this with the arteries providing the materials that are discharged by perspiration at the surface of the body, and that the fluids moving through this succession of distinct structural systems should be throughout the same fluid, and the channels through which it is discharged at the surface, not only unobstructed by intervening capillary networks, but uniform from one end to the other, and we should have homological structures. The difference between the one and the other case shows the remoteness of their analogy; and, instead of calling these openings *anal apertures*, I would prefer the name of *coeliac apertures*.