

they still continue the rapid vibration of their cilia ; and though severed from the polypus, the tentacula continue to move forward through the water ; the severed tentaculum of a flustra is seen to swim through the water like a worm. The number of those organs varies much ; they are eight in *Serialaria lendigera*, and in *Plumularia falcata*, fourteen in *Cellaria avicularia*, twenty-two in *Flustra carbacea*. The effect of those motions of the cilia again is obviously to change the stratum of water constantly in contact with the most delicate fleshy parts of those zoophytes, with the highly organized soft irritable fleshy polypi. Thus they aerate the cellular texture of their body, at the same time that they bring the animalcules—their ordinary food—within the grasp of the tentacula.”\*

All polypes—ascidian and hydraform—subsist on animal matter, feeding upon it either in a living state, or dissolved and suspended in the circumfluent medium. The *Hydræ* and smaller species seize on worms and animalcules brought accidentally within reach, or carried into the vortex formed by the play of the tentacular cilia :† the larger kinds (*Helianthoida*) swallow small crabs and shelled mollusca, rejecting the shells after having sucked out the soft contents. The food, in the *Hydroïda*, is dissolved and necessarily made chylous in the stomach, and directly absorbed from it ; but in the ascidian it is probable that the process of chylification is not completed until the food has passed into the intestine. In the higher animals the chyle is mixed with the blood and exposed to the influence of atmospheric air before it is fitted for assimilation and growth ; and though bloodless, this air is no less necessary to the growth and existence of polypes, which soon languish and die in vessels of un-

\* *Lect. Comp. Anat. in the Lancet, 1834, Vol. ii. p. 959.*—“ All the cilia appear to commence and to cease their motions at the same moment. The constancy with which they continue would seem to exclude the possibility of their being the result of volition ; and they are, therefore, more probably determined by some unknown physical cause, dependent, however, on the life of the animal.” *Roget, Bridgew. Treat. i. 173.*

† “ Il seroit cependant possible de croire que ces animaux pourroient aussi bien se nourrir d'animalcules que les Hydres ; mais Cavolini dit positivement que, quoiqu'il ait souvent observé des polypes de gorgones, de millépores dans des eaux remplies d'animalcules, il ne les a jamais vus essayer à en saisir avec leur tentacules.” *Blainville, Man. d'Actinol. p. 97.* *Raspail* nevertheless proves that they feed on them.—*Mem. Soc. Hist. Nat. iv. p. 88.*