

tractions, owing to the difference of structure of its different parts; the lower extremity, which is capable of the greatest dilatation, differing somewhat from the main body, and this again from the upper portion of the tube, which enlarges into a central cavity. This tube, or proboscis, when contracted, does not extend beyond half the depth of the main cavity of the body. It is even, at times, shortened beyond this limit. In its utmost state of contraction, the lower opening is rather widened, and the proboscis may then be compared, in some degree, to the mouth of other Medusæ, though its margin is not split into lobes. When relaxed, it either hangs straight downward or forms undulations in its course, and hangs then, generally, not only to the lower margin of the main cavity, but more or less beyond it. When greatly elongated, it may hang between the tentacles for three times the length of the body itself. The upper part of the tube, in the centre, is always thinner than the middle and lower portions. To this middle part the eggs are attached. From the central cavity, into which the proboscis empties, arise, at right angles with each other, four chymiferous tubes, communicating freely with the central cavity, as well as with the cavity of the proboscis. These four tubes, following the inner surface of the gelatinous disk, extend to its lower margin, where they are united with each other by a circular tube, of the same appearance and the same diameter, forming a continuous canal around the lower part of the disk. This circular tube communicates as freely with the vertical radiating tubes, as these communicate with the central cavity; so that digested materials, and the water in which the food is dissolved, and with which it is mixed in greater or smaller quantity, circulate freely, to and fro, in all the parts of this apparatus. It is astonishing how quickly an animal, swallowed by this little Medusa, is dissolved, and its particles circulated throughout the system. The digestion takes place above the mouth, which shuts over the food, or simply stretches upon the surface of the animal upon which it feeds, sucking its juices, and immediately after dropping its dead carcass. In that way our *Sarsia* swallows very quickly large numbers of small Medusæ, and especially other species of Hydroid Medusæ and the young of *Aurelia flavidula*, and also other soft animals and small Crustacea; I have, however, never seen it swallowing the hard parts of any of the latter, but only sucking their juices.

The liquid food thus secured is moved on, through the proboscis, in jerks, to and fro, under the contractions of the tubular proboscis. It takes, however, some time for the contents of the stomach or proboscis to pass entirely into the central digestive cavity, into which they are finally pressed, mingled with more or less water; as a constant process of regurgitation is going on, so that particles which were at one time near the upper end of the proboscis, are now and then suddenly pressed back into the lower end of that organ, the contractions of the mouth