

stream of water from the interior of the body; carrying away particles, which separate from the sides of the canals, and which are not only seen, under the microscope, constantly issuing from these orifices, but may even be perceived by the naked eye, propelled occasionally in larger masses.\*

For the supply of these constant streams, it is evident that a large quantity of water must be continually received into the body of the sponge. It is by the myriads of minute pores, which exist in every part of the surface, that this water enters, conveying with it the materials necessary for the subsistence of the animal. These pores conduct the fluid into the interior, where, after percolating through the numerous channels of communication which pervade the substance of the body, it is collected into wider passages, terminating in the fecal orifices above described, and is finally discharged. The mechanism by which these currents are produced is involved in much obscurity. There can be no doubt that they are occasioned by some internal movements; and the analogy of other zoophytes would lead us to ascribe them to the action of fibrils, or *cilia*, as they are termed, projecting from the sides of the canals through which the streams pass; but these cilia have hitherto eluded observation, even with the highest powers of the microscope.

The organization of sponges is as regular and determinate as that of any other animal structure, and presents as systematic an arrangement of parts. In some species, such as the common sponge, the basis is horny and elastic, and composed of cylindric tubes, which open into each other, and thus form continuous canals throughout the whole mass.

Others have a kind of skeleton, composed of a tissue of needle-shaped crystals of carbonate of lime, or of silex. These hard and sharp-pointed fibres, or spicula, are disposed around the internal canals of the sponge, in the order best

\* The currents issuing from the larger orifices are best seen by placing the living animal in a shallow vessel of sea-water, and strewing a little powdered chalk on the surface, the motions of which will render the currents very sensible to the eye. Fig. 53 exhibits these phenomena.