

tion. In the simpler forms of animals, the cilia are the organs for motion, respiration, and the obtaining of food; they move with great regularity and velocity, and are exceedingly numerous. Dr. Grant has calculated four hundred millions of them on a single flustra foliacea! and ascertained their existence in the sponge; the currents which incessantly flow into the pores of that substance, being produced by the vibrations of the cilia attached to the inner surface of the tubes.

9. THE HYDRA, OR FRESH-WATER POLYPE.—In the hydra, or fresh-water polype (Tab. 98, fig. 3), that inhabits our ponds, ditches, and rivulets, we are presented with a highly organized structure, but of the simplest possible mechanism; the whole animal consisting merely of a gelatinous, transparent, open cylinder, or tube, contracted at one extremity, and having the margin of the other prolonged into filaments or tubular tentacula. It is in fact a stomach, or digestive apparatus, with no appendage but the instruments for seizing its prey. A vertical section of the animal (Tab. 98, fig. 5) highly magnified, shows the interior of the receptacle for the food, the relative thickness of its substance, and the manner in which the tentacula are formed by an extension of the upper margin. This creature, perhaps the most simple form of animal life, is endowed with vitality in a very extraordinary degree, and its substance is highly sensitive and contractile in all its parts. It