

through the fluid, produced apparently by the vibrations of cilia, which are set on various parts of the body, and often seem to cover the whole surface: the other, more rapid and energetic, when the animalcule darts forward in a particular direction, as if in pursuit of prey, and proceeds by sudden and irregular starts, like a vivacious insect or fish. The voluntary nature of their motions is evident from the dexterity they display in avoiding obstacles, while swimming together in myriads in a single drop.

The great agent in the movements of the animal frame being the muscular fibre, it was natural to suppose that a texture analogous to that of muscles might exist in these latter genera of infusoria. It was not till very recently, however, that the actual presence of contractile fibres could be recognised. But this problem has at length been solved by the discoveries of Ehrenberg, who, in his observations of the larger and more highly organized species belonging to the order of *Rotifera*, has, with a magnifying power of 380, distinctly seen muscular bands running in pairs between the two layers of transparent membrane which envelop the body. When the animalcule throws itself into its violent lateral contortions, these fibrous bands are observed to become broader and thicker, as well as shorter, on the side towards which the contractions take place. There can, therefore, be no doubt that these are muscular organs, and that they are the real agents by which the motions witnessed are effected.

These *Rotifera*, or wheel animalcules, are so named from their being provided with an apparatus for creating a perpetual eddy, or circular current in the surrounding fluid. The remarkable organs, by which this effect is produced, are generally two in number, (Fig. 80, r, r,) and are situated on the head, but do not surround the opening of the mouth, as is the case with the tentacula of polypes. They consist of circular disks, the margins of

