

can greatly elongate its body (as is shown in fig. 2), and, on the other hand, can contract its filaments, and shrink itself into a minute globular mass.

These animals are very voracious, and feed only on living animalcules, which they seize and secure by their tentacula. The marvellous power which the hydræ possess of bearing all kinds of injuries and mutilations with impunity, is well known. In whatever manner the animal be divided, the injured or lost parts are repaired, or reproduced; and if cut into pieces, every piece becomes a perfect animal. If the body be split in half, each portion grows into a complete hydra, as is shown in this drawing (fig. 9); and as if there were no limits to its transformations, the creature may be turned inside out, and that which was the surface of the stomach will become the epidermis, and the outer skin form the lining of the new stomach, and carry on the process of digestion! \* This examination of the structure and economy of the hydra will prepare us for the investigation of those more complicated forms of zoophytes which possess calcareous supports or skeletons, and form the more immediate subject of this discourse. The continuance of the ciliary motion in parts separated from the rest of the body, and even for some time after death, proves

\* M. Trembley, of Geneva, in 1740, first observed the structure and economy of the fresh-water polype or hydra. Consult Dr. Roget's *Bridgewater Essay*; and Dr. Johnston's *British Zoophytes*, 1 vol. 8vo. 1838: a work of high interest, and evincing great talent and research.