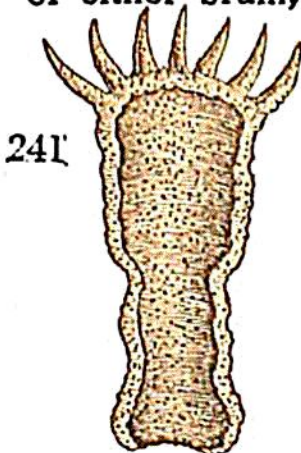


CHAPTER IV.

Nutrition in the lower Orders of Animals.

THE animals which belong to the order of polypi present us with the simplest of all possible forms of nutritive organs. The hydra, for instance, which may be taken as the type of this formation, consists of a mere stomach, provided with the simplest instruments for catching food,—and nothing more. A simple sac, or tube, adapted to receive and digest food, is the only visible organ of its body. It exhibits not a trace of either brain, nerves, or organs of sense, nor any part



corresponding to lungs, heart, or even vessels of any sort; all these organs, so essential to the maintenance of life in other animals, being here dispensed with. In the magnified view of the hydra, exhibited in Fig. 241, the cavity into which the food is received and digested is laid open by a longitudinal section, so as to show the comparative thickness of the walls of this

cavity. The structure of these walls must be adapted not only to prepare and pour out the fluids by which the food is digested, but also to allow of the transudation through its substance, probably by means of invisible pores, of the nutritious particles thus extracted from the food, for the purpose of its being incorporated and identified with the gelatinous pulp, of which the body appears wholly to consist.

The thinness and transparency of the walls of this cavity allow of our distinctly following these changes by the aid of the microscope. Trembley watched them with unwearied perseverance for days together, and has given the following