

organs, where its elaboration is completed by the influence of atmospheric air, but also to all other parts of the system, where such a supply is required for their maintenance in the living state. The objects of these subsequent functions, many of which are peculiar to animal life, have already been detailed.\*

This subdivision of the assimilatory processes occurs only in the higher classes of animals, for in proportion as we descend in the scale, we find them more and more simplified, by the concentration of organs, and the union of many offices in a single organ, till we arrive, in the very lowest orders, at little more than a simple digestive cavity, performing at once the functions of the stomach and of the heart; without any distinct circulation of nutrient juices, without vessels,—nay, without any apparent blood. Long after all the other organs, such as the skeleton, whether internal or external, the muscular and nervous systems, the glands, vessels, and organs of sense, have one after another disappeared, we still continue to find the digestive cavity retained, as if it constituted the most important, and only indispensable organ of the whole system.

The possession of a stomach, then, is the peculiar characteristic of the animal system as contrasted with that of vegetables. It is a distinctive criterion that applies even to the lowest orders of zoophytes, which, in other respects, are so nearly allied to plants. It extends to all insects, however diminutive; and even to the minutest of the microscopic animalcules.†

The mode in which the food is received into the body is, in general, very different in the two organized kingdoms of nature. Plants receive their nourishment by a slow, but

\* See the first chapter of this volume, p. 23.

† In some species of animals belonging to the tribe of medusæ, as the *Eudora*, *Berenice*, *Orythia*, *Favonia*, *Lymnoria*, and *Geryonia*, no central cavity corresponding to a stomach has been discovered: they appear, therefore, to constitute an exception to the general rule. See Péron, *Annales de Muséum*, xiv. 227 and 326.