

my entails : the means of their propagation and increase are the first of a series of facts on which a theory of generation must rise ; the existence of vibratile cilia on the surfaces of membranes, which has since been shewn to be so general and influential among animals, was first discovered in their study ; and in them is first detected the traces of a circulation carried on independently of a heart and vessels. The close adhesion of life to a low organization,—its marvellous capacity of redintegration ; the organic junction of hundreds and thousands of individuals in one body, the possibility of which fiction had scarcely ventured to paint in its vagaries, have all in this class their most remarkable illustrations.—On the geologist zoophytology has peculiar claims. Its subjects are apparently the first of animals which were called into existence, and from that high date to this time, they have played a part in the earth's mutations, from chaos to the present well ordered scene, greater perhaps than any other class of beings. Separating from the waters of the ocean the calcareous matter held in solution, they reduce it to a solid state ; constructing therewith their varied polypidoms or corals which, by their continual growth, their coalescences, their enormous numbers and extent, first roughen the smooth basin of the sea, raise up reefs and ridges that obstruct the hitherto open course of navigation, and become ultimately the foundation of islets and islands that remain the “monumental relics” of the puny race. As now the process and change goes on in tropical seas,—so operated it, in the preadamic times, over the waters of the globe, for it is principally from the debris of polypous excretions that the extensive beds and quarries of chalk and limestone which are found in every region of the globe take their original.*—But it is to the zoologist that I exclusively address myself in this work, and however considerations like the above may enhance the importance of the subject in the estimation of others, they sway him little, and lie apart from his

* See Lamarck's Anim. s. Vert. ii. 10.