

upper extremity of the pear-shaped head ; 4, a vertical section showing the enlargement of the alimentary canal, with the hollow lenticular spaces which descend through the axis of the column, forming the joints, and giving elasticity and flexure to the whole stem, without risk of dislocation. *A. rotundus* is found at Bradford in Wiltshire, Abbotsbury in Dorset, at Soissons, and Rochelle. This species—known as the Bradford Pear-Encrinite—is only found in the strata mentioned

The Corals of this epoch occur in great abundance. We have already remarked that these aggregations of Polyps are often met with at a great depth in the strata. These small calcareous structures have been formed in the ancient seas, and the same phenomenon is extending the terrestrial surface in our days in the seas of Oceania, where reefs and atolls of coral are rising by slow and imperceptible steps, but with no less certainty. Although their mode of production must always remain to some extent a mystery, the investigations of M. Lamaroux, Mr. Charles Darwin, and M. D'Orbigny have gone a long way towards explaining their operations; for the Zoophyte in action is an aggregation of these minute Polyps. Describing what he believes to be a sea-pen, a Zoophyte allied to *Virgularia Patagonia*, Mr. Darwin says : " It consists of a thin, straight, fleshy stem, with alternate rows of polypi on each side, and surrounding an elastic stony axis. The stem at one extremity is truncate, but at the other is terminated by a vermiform fleshy appendage. The stony axis which gives strength to the stem, may be traced at this extremity into a mere vessel filled with granular matter. At low water hundreds of these zoophytes might be seen, projecting like stubble, with the truncate end upwards, a few inches above the surface of the muddy sand. When touched or pulled, they drew themselves in suddenly, with force, so as nearly or quite to disappear. By this action, the highly-elastic axis must be bent at the lower extremity, where it is naturally slightly curved ; and I imagine it is by this elasticity alone that the zoophyte is enabled to rise again through the mud. Each polypus, though closely united to its brethren, has a distinct mouth, body, and tentacula. Of these polypi, in a large specimen there must be many thousands. Yet we see that they act by one movement ; that they have one central axis, connected with a system of obscure circulation." Such is the brief account given by a very acute observer of these singular beings. They secrete the calcareous matter held in solution in the oceanic waters, and produce the wonderful structures we have now under consideration ; and these calcareous banks have been in course of formation during many geological ages. They