biradially symmetrical fundamental form is transformed into the bilaterally symmetrical. I lay great stress upon this apparently unimportant consideration of the form of the mouth, as it is the expression of a fundamental character in the architecture of the body of the Actinia, which is, moreover, the standard for the configuration of the œsophagus and the position of the septa.

The œsophagus is a sac, flattened in the transverse direction, and open below and above; it is furnished with circular muscular fibres on its endodermal aspect, whilst it has exceptionally longitudinal fibres on the ectodermal aspect, the one turned towards the lumen of the tube. Its walls are solid, and only two instances have been observed in which they have openings leading into the radial chambers. In the typical Actiniæ the lower end of the tube is produced into two long lappets, which fall in the sagittal axis and consequently under the two corners of the mouth, or, what is the same thing, where the two wider sides of the tube meet each other. The inner side of the œsophagus is covered with regularly arranged longitudinal furrows, of which two, corresponding to the angles of the mouth, are conspicuous by their special breadth and depth. These furrows or grooves lead from the oral angles to the œsophageal lappets, on which they run up to the end; they constitute half canals, which remain open, even when the two wider sides of the œsophagus are pressed firmly against one another, and then become two canals leading into the stomach (Pl. I. figs. 2, 5).

As the œsophageal grooves pass at the one end on to the œsophageal lappets, so they are bounded at the other end by two lip-like swellings, which enclose the oral angle: these are simply strongly-developed papillæ, which are also found in varying number on the oral margin, and indicate the ends of the longitudinal ridges rising between the smaller longitudinal furrows of the œsophagus. The Zoantheæ and Ilyanthidæ form an exception to what has been said; the former have only one distinct œsophageal groove, whilst in the latter there are none worth mentioning. We meet here with differences, which are correlated with the structure and arrangement of the septa.

The septa are supporting plates formed of connective tissue, which are covered on both sides by endodermal epithelium, bear muscular fibres on both sides, and thus become very important organs for the contraction of the body. In those Actiniæ, which still preserve the most primitive structure of the septa, *e.g.*, the genus *Corallimorphus*, we can distinguish only two systems of muscles; the fibres run for the most part longitudinally on the one side, transversely on the other, forming in both cases a smooth, only slightly pleated layer. Considered more closely, the former spring from the pedal disk and the lower parts of the wall, and converge towards the œsophagus and central parts of the oral disk, whilst the latter arise from the whole length of the wall and are inserted into the oral disk and the œsophagus. In the majority of Actiniæ the longitudinal layer is differentiated by local, specially rich development of muscular fibres and repeated pleating into a special more or less sharply-defined muscle, the retractor, which projects