

distance beneath the surface such sections show ten mesenteries, arranged in a similar manner to those of *Cirripathes propinqua* (cf. fig. 4, p. 39). Each mesentery consists of a thin layer of mesogloea, clothed on each side by entoderm. The mesogloea of the stomodæum is thus united to that of the oral cone by ten slender partitions, and the interseptal chambers thus formed are lined by entoderm. The interseptal chambers are at first very small, and those at each end of the long axis of the stomodæum remain slit-like for a considerable distance. The "directive" mesenteries are very narrow for their whole course (cf. Pl. XIII. fig. 7); beneath the stomodæum they are attached to the body-wall for a very short distance, and have a slightly thickened border. The transverse pair of mesenteries increase in breadth in the lower part of the oral cone, and beneath it rapidly extend to the lateral extremities of the polyp. In their lower section these mesenteries are much thickened and bear the sexual elements. The greater part of the lateral sections of the cœlenteron is occupied by the transverse mesenteries and by the convoluted filaments to which they give rise. They are the longest and most important of all the mesenteries, and their filaments practically fill up the whole of the space beneath the stomodæum. The two pairs of secondary mesenteries, situated one on each side of the transverse mesenteries, are never important, and become lost before the base of the stomodæum is reached. In the subhorizontal section figured (Pl. XIII. fig. 7), the member of each secondary pair which is situated above the stomodæum extends from the stomodæum to the body-wall. On the opposite side of the stomodæum the right hand mesentery is seen to have lost its connection with the body-wall, but remains as a projection from the stomodæum. That on the left hand has disappeared above the level of the section in that part. The secondary mesenteries do not bear filaments, nor is their free margin thickened, as in the case of the "directive" mesenteries. The appearance and situation of the mesenterial filaments will be understood by a reference to the figures already cited; their structure will be described later. The relation of a polyp to the sclerenchyma, which serves as its support, is best studied in sagittal sections showing the sclerenchyma in transverse section. Pl. XIII. fig. 6 represents a section passing through the extreme elongation of the stomodæum, and shows the insertion of the sagittal tentacles. Beneath the stomodæum the section passes through two mesenterial filaments, and still lower, quite at the base of the cœlenteron, a rounded mass of tissue is seen, containing a central lumen, within which the sclerenchyma is situated. The sclerenchymatous sheath consists externally of a comparatively thick and irregular layer of entoderm, beneath which is a thin layer of mesogloea. Its inner surface is clothed by a thin and irregular epithelium, which constitutes the secretory layer. The sclerenchyma consists of a large number of very thin, concentric, horny lamellæ, arranged around a comparatively large central lumen. The mesogloea of the sclerenchymatous sheath is united to that of the base (cœnenchyma) by means of a short septum (Pl. XIII. fig. 6, sep.), which runs the whole length of a branch.