The surface of the oral disk is smooth, or only indistinctly furrowed radially; if examined in transverse section (fig. 5) it shows a set of strong mesodermal muscles, a broad band, separated both from the endoderm and the ectoderm by a layer of supporting substance. This band is broken by a separating bar of connecting substance, corresponding to the insertion of every septum. It is further a law of its development that the supporting substance grows out strongly into the muscular band from the endodermal and ectodermal sides alternately, and forms ridges from which ramified supporting layers stretch towards the opposite side. In this way smaller and larger elongated compartments are formed, which are filled with muscular fibres. These muscular fibres, like those of the wall, are extremely thick, and the manner in which they pass on to the tentacles distinguishes the *Ophiodisci* sharply from other Actiniæ.

Although the tentacles were badly preserved, it was perfectly clear that they are thin-membraned on one side but thickened on the other (fig. 2). This thickening is caused by a muscular cord which can be followed even with the naked eye as a broad fibrous streak running from the oral disk to the tentacle. It occupies that side of the tentacle which is turned upwards in a state of rest, and projects at its base right and left a little above the surface. It thus forms two wing-like expansions which pass a little way on to the oral disk. The structure of this cord is the same as that of the muscular band of the oral disk; it is composed of strong, thickly compacted muscular fibres, divided by thin layers of connective substance into compartments of muscular fibres.

Muscular fibres are wanting in the thin membraned parts of the tentacles, unless they be present in the ectoderm, which could not be determined, as the ectoderm was completely macerated away. Whilst the muscular cord passes into the oral disk, the thin membraned parts of the tentacles, on the other hand, are prolongations of the wall. This is brought about by the fact that the tentacles lie exactly on the border line at which wall and oral disk are united.

Before passing into the œsophagus, the oral disk is raised in the periphery of the mouth into a proboscis-like projecting lip. The proboscis is marked on either side with about ten longitudinal furrows, and is likewise furnished with two œsophageal grooves, which are enclosed by two strong longitudinal folds, hard as cartilage, and pass downwards on to the long œsophageal lappets. In one specimen the lower part of the œsophageal grooves appeared closed into a tube by fusion of the margins of the folds.

The number of the septa amounted in all to forty-eight pairs, which are distributed in four cycles. The first three cycles, that is, the first twenty-four pairs, are formed exclusively of muscular septa which do not bear reproductive organs; of these the septa of the first two cycles only reach the œsophagus, the remaining twelve pairs are imperfect. Septal stomata are wanting. The muscles are slightly developed, for I could not even find a parietobasilar muscle. In consequence of insufficient preservation, the free margins of the septa had become frayed out, and only part of the mesenteric filaments remained (fig. 4).