and is nothing else but the cavity (A) which we observed also in the peduncles of the other Lepadidæ, and which can be traced as a continuation of a part of the cœlom. In the superior part of the peduncle (Pl. V. fig. 8) this wide canal (measuring here 0·9 by 0·56 mm.) has an oval shape, and is completely filled with a very delicately granulated mass, which I think more resembles blood serum than any other substance. The connective tissue surrounding this canal, and especially the interior of the peduncle, has a very spongy structure; as I shall point out again when treating of the development of the ovaries within the peduncle, I think the contents of the duct and the tissue which surrounds it serve to nourish the ovaries.

At a short distance—about 3 mm.—from the superior extremity the duct begins to get narrower; the space occupied by the delicately granulated substance measures now only 0·22 mm. in diameter. The spongy mass of connective tissue has grown much thicker, and forms especially towards the interior of the peduncle a very thick wall; for the first time here cement-ducts are seen within this thickened portion of the wall of the duct (Pl. V. fig. 9). Between this wall and the central mass of the granulated substance a layer of vesicles can be distinguished. I think they are formed by the cement poured out into the canal and pressed between the wall and the central mass. One millimetre and a half farther down the duct becomes still narrower; it now has with its wall a diameter of 0·43 mm. only. The granulated substance has almost totally disappeared, but the interior of the wall is everywhere covered with large and small cement vesicles. Below the middle of the peduncle, at numerous places, larger cement-ducts pour out their contents into this canal, which eventually has in all respects the shape of one of the wider cement-ducts such as are found also in the interior of the peduncle. In the undermost part of the peduncle it runs no longer close to the rostral side, but is observed in the centre of the peduncle. It there quite resembles two other larger cement-ducts which run longitudinally through the peduncle. Probably these ducts are open at their inferior extremities, which, so far as I could make out, are not continued up to the base of the peduncle; the latest sections I prepared of the peduncle do not show the ducts in the connective tissue.

So we see that in *Scalpellum regium*, the cement-ducts do not run within the cœlom-cavity, or what I feel inclined to consider as its homologue, but that this cavity in its most inferior part is itself changed into such a cement-duct. The other ducts stand in open communication with the one at the rostral side. A second difference is seen in the structure of the wall of the ducts; the smooth-lined sheath of the ducts in *Scalpellum vulgare*, which made me compare the substance of which that wall is built up with chitin, is nowhere to be observed in *Scalpellum regium*. No doubt the investigation of other species of *Scalpellum* and of other genera of Cirripedia will show that the cement-apparatus of this group of Crustaceans presents many more variations than would have been expected beforehand. The knowledge of these variations is no doubt of great interest, yet it would be of much more importance still, if the morphological significance of the apparatus were more apparent.