

structure. I have been unable to detect generative organs in any specimen investigated.

“Owing to the abundant incrustation, the body-wall becomes as hard and brittle as stone, and does not permit therefore of investigation by means of sections. In this case therefore, and in the remaining forms with similarly strong incrustation, I made use of the method of grinding tested and recommended by G. v. Koch in his researches on *Tubipora*.

“The body-wall is of considerable thickness; its mesogloea exhibits a structure very different from the remaining species of *Epizoanthus*, as being penetrated by deposits throughout its whole depth. These deposits consist of particles of sand with irregular angles, and are set in a strong circular fence, reducing the mesogloea to thin lamellæ; but there persists a very narrow internal lamella bounding the endoderm all round. In the homogeneous mesogloea-lamellæ are situated roundish cells which give off fine radiating processes, and fine fibres provided with nuclei; the presence of the cell-heaps, which are to be met with in the remaining species of *Epizoanthus*, I was unable to demonstrate in this case. A transverse section through the wall of the shell exhibits a similar condition in the cœnenchyme. This latter is also of considerable thickness, and is internally traversed by the large endodermal tubes which connect the various cœlentera together.

“The body-wall is, as has been already mentioned, bent above at a sharp angle, thus forming a plate-like surface. In contrast to the remaining members of the genus, where it turns deeply inwards vertically, it is here only slightly invaginated, a difference resulting from the slighter development of the sphincter. The latter commences to a certain extent on the horizontal part of the body-wall, and then thickens gradually into a truncated muscular mass, which appears fusiform in section, and is only slightly curved inwards. It lies enclosed in the innermost lamella of mesogloea; the latter is thus much thickened, and is free from adventitious deposits. The sphincter is on both sides bounded by a layer of mesogloea, which extends inwards to the commencement of the oral disc, is charged with the usual accretions, and is a direct continuation of the outer sandy layer.”

So much for the anatomical description given by Erdmann, which sufficiently proves that *Epizoanthus cancrisocius* must be separated systematically from *Epizoanthus parasiticus*, the latter possessing larger and coarser polyps and far less incrustation. I have identified the animal with the *Epizoanthus cancrisocius* of Studer, as he records for his specimens similar dimensions, and a marked incrustation, at least for the basal membrane.¹ In other points his description is not sufficiently exhaustive, and this is still more true of Gray's account.² Only the statement of the latter that the large

¹ *Monatsber. d. k. Akad. d. Wiss. Berlin*, 1878, p. 547.

² *Proc. Zool. Soc. Lond.* 1867, p. 287.