

is further strengthened ventrally by a muscular layer, but this will be described under its special head. The preparations showed traces of what might be an epithelial layer on the inner surface of the before-mentioned basement-tissue, but such were far from being distinct. In the living *Rhabdopleura*, on the other hand, such an epithelial layer is described by Professor Lankester, under the name of "enteric epithelium," and its distinctness in this form suggested its presence in *Cephalodiscus*.

Body-Cavity.—The foregoing layers enclose the body-cavity (*co* in sections of buds), which is generally filled more or less completely by the alimentary canal. In the preliminary account¹ it was pointed out that this investment was probably homologous with the "thin glassy skin" of Sars surrounding the digestive canal in *Rhabdopleura*, and that the preparations gave no evidence of perigastric fluid. Though the existence of a body-cavity was not specially noticed, the preparations did not warrant a denial of its presence in *Cephalodiscus*, as Professor Lankester states in a recent paper,² for thus the hypoderm and basement-tissue must have been amalgamated with the coat of the alimentary canal, which was not the case. This statement does not in any way detract from the credit which Lankester has in clearly describing for the first time the chamber in the living *Rhabdopleura*. Small nucleated corpuscles were occasionally seen in groups in the cavity of *Cephalodiscus* in the sections, but they may have been introduced from other sources. Neither Sars nor Lankester observed such in the living *Rhabdopleura*. In sections the continuation of the body-cavities in front are seen a little behind the paired cavities connected with the lophophoral apparatus, and are likewise surrounded by basement-tissue.

Muscular System and Pedicle.

As previously mentioned, the short ventral surface of the body is continued into the cylindrical pedicle, which is invested by the hypoderm and basement-tissue, the former being thrown into numerous and rather regular transverse wrinkles in contraction, and being thicker dorsally than ventrally. At the terminal region of the foot (Pl. VI. fig. 1, *hps*) the hypoderm is much increased in thickness, but has the same structure. It is free from the wrinkles which characterise other parts of the region; and appears indeed in favourable preparations to form a flattened sucker-like disk. The basement-layer within the terminal hypoderm is thick, and has attached to it the longitudinal muscular bands, so that it is possible it may be occasionally used as a sucker like that of *Loxosoma*, or like the larval organ in *Balanoglossus*. The entire pedicle within the basement-tissue is filled with the longitudinal fibres, which arise on the ventral wall of the body in the region of the mouth, where they present the form of a thinner lateral region and a denser central, the latter in

¹ *Op cit.*, p. 344.

² Polyzoa, Ency. Brit., vol. xix. p. 436.