

Fig. 5. Section transverse to the axis of the zooid of a segment of the body wall of a gastrozooid of *Sporadopora dichotoma*, taken near the lower region of the zooid.

S. Wall of the sac of the zooid seen in section.

E. Ectoderm.

M. Muscular and basement layer showing a series of stout longitudinal slips in section.

L. Layer of transparent endodermal cells, the representatives in this region of the larger elongate gastric cells which exists higher up in the body cavity.

E.N. Pigmented endoderm cells, such as line the canals of the cœnosarcal meshwork.

Fig. 6. Portion of the muscular layer of the body wall of a gastrozooid of *Sporadopora dichotoma* viewed from its inner surface. The layer is seen to be composed of a closely set series of longitudinal narrow muscular slips. The layer is crossed by fine transverse striations, the nature of which was not determined, no definite circular muscular fibres having been detected in the zooids. The striations probably are caused by wrinkles in the basement membrane.

Fig. 7. One of the longitudinal muscular slips of the last figure, much enlarged, to show that it is composed of fusiform nucleate closely-packed elements.¹

Fig. 8. These fusiform muscular elements still more magnified.

Fig. 9. Nematocysts of *Sporadopora dichotoma*.

a Elongate form of nematocysts occurring only in the nematophores and surface layer of the ectoderm, and that investing the more superficial cœnosarcal canals. a' The same, with the thread protruded.

b Smaller form of nematocyst, abundant in the tentacles of the gastrozooids, ectoderm of the dactylozooids, and other regions. b' The same, with the thread protruded.

c, d, e Successive stages in the development of the smaller form of nematocyst.

Fig. 10. Section through a portion of a male gonophore sac of *Astylus subviridis*, showing various stages in the development of spermatozoa (cf. Pl. VIII. G).

S. Wall of the gonophore sac, a reflection of the ectoderm.

S'. Reflection of the same over one of the lobules of the generative mass.

S''. Thin membrane enclosing the spermatozoa within the lobule.

¹ N.B.—By error in plate marked $\times 100$ instead of $\times 600$.