

of an upper cylindrical portion (Pl. VIII. fig. 2, Z), and a wider saucer-shaped basal region, to join the margins of which the lower part of the cylindrical portion gradually widens out inferiorly. Canals are given off from the margin of the basal saucer of the zooid all round, and pass to join the general cœnenchymal meshwork; but no canals at all are given off from the rounded under surface of the zooid. The upper surface of the cylindrical portion of the zooid is nearly flat, and is occupied by the mouth, which is a cruciform slit bounded by elongate gastric endoderm cells, closely similar to those described as existing in *Sporadopora*.

The dactylozooids are simple elongate-conical bodies devoid of mouths, with a minute structure closely similar to that of the corresponding zooids of *Sporadopora*. In the retracted condition they are thrown into a series of transverse folds which are indicated by fine transverse lines in the figure (Pl. VIII. fig. 2, TZ, TZ). The zooids appear to be retracted directly within their sheath, and not to be attached on one side of their base.

The gonophores are contained in ampullæ, which are often sunk deep within the cœnosteum; and it is not apparent by what means the large mature planulæ find their way to the exterior. I have not had sufficient material at command to determine whether the ampullæ, as they enlarge, come gradually to communicate with the surface of the cœnosteum by means of absorption of the intervening hard tissues. It seems probable that they may do so.

The ova are solitary, one only being developed in each growing ampulla. Each ovum is developed within the cup of a cup-shaped spadix (Pl. VIII. fig. 2, O). The ovum is provided with a germinal vesicle and spot. It is covered by a fine layer of ectoderm, which is reflected over it from the surface of the spadix. It is not patent how fertilisation takes place—that is to say, how the spermatozoa find their way to the sometimes deeply-seated ova. As the ovum advances in development and increases in size, the spadix enlarges with it (Pl. VIII. fig. 2, G). Subsequently, however, in later stages, the spadix appears not to increase further; and when in relation with a nearly fully-developed planula appears proportionately small.

The nearly mature planula (Pl. VIII. fig. 2, P) is a large object of an ovoid form, with a long diameter greater than the extreme width of the gastrozooid. Its ectoderm and endoderm are plainly differentiated. The endoderm is composed mainly of oil-cells, but contains also a few fully formed nematocysts of the larger variety. The ectoderm, a thick layer, shows the characteristic striation vertical to the outer surface of the planula, the striæ being composed of granules and nuclei arranged in linear groups. As far as could be ascertained from the scanty material at command, it appeared that the ectodermal layer is formed in development by the process of delamination. No trace of an invagination in the embryo was observed.

In very advanced stages the planulæ become folded to a slight extent, as in the case