

forms a sac open above. The open mouth of the sac is crammed with nematocysts of the larger kind, closely packed side by side, with their pointed ends directed to the surface. The cells are so closely packed that, in a section of the superficial layer taken parallel to the surface through the nematophores, no interstices can be seen between them (Pl. X. fig. 3, N). The lower part of the cavity of the nematophore is filled with nuclei and parent cells of the nematocysts. The nematophores, as viewed from the surface of the superficial layer, are seen to have an irregular outline, showing a tendency to be somewhat oblong, with curved boundaries.

No triple-spined nematocysts, such as those occurring in *Millepora* and in most other Hydroids, were detected as existing in any of the Stylasteridæ. The two kinds described as occurring in *Sporadopora dichotoma* appear to be present in all members of the family, with very slight variations in form indeed.

*Dactylozooids.*—The dactylozooids are in all the Stylasteridæ invariably destitute of tentacles, being reduced to the condition of simple tentacles themselves, and evidently performing a tentacular function.

*Zooids.*—The zooids in *Sporadopora dichotoma* are of two kinds, dactylozooids and gastrozooids: the former occupying the smaller, and the latter the larger, style-bearing pores, already described as characteristic of the corallum.

They are closely similar in form and structure in all the genera of Stylasteridæ hitherto examined, and differ only in dimensions. They are simple, elongate, conical bodies, just like the ordinary tentacles of Hexactinians in form, and are devoid of mouth or any opening to the exterior. They are attached to, and, when unprotruded, retracted within membranous sacs or sheaths which rest within the corresponding pores of the corallum. In *Sporadopora*, the sacs of the zooids, the walls of which are shown in longitudinal section in Plate III. F F, are composed of a transparent membrane, derived from the ectoderm, and continuous with its surface layer. The membrane has numerous fine nuclei dispersed in its substance, and is strong and tough. It is lined on its inner surface next the cavity of the sac by a layer of small transparent cells, which are shown in the figure cited above.

On their outer surfaces the walls of the zooid sacs are abutted on by the peculiar radial offsets of the cœnosarcial meshwork already described. These offsets appear to lose their tubular character as they near the walls of the sacs, and, as far as was seen, no openings occur in the sac walls communicating by means of these radial canals with the cœnosarcial circulation, although such an arrangement was supposed to exist when the first hasty examination of specimens was made.

The sacs are attached to the bases of the zooids, being continuous in those regions with the ectodermal covering of the zooids. They closely invest the retracted zooids, and are thus cylindrical in form in their deeper parts; whilst above the level of the retracted zooids they contract gradually in diameter, to terminate at the surface of the