

on the inner margin of the nave. The dichotomously branched bodies are discoidal and more or less circular; their appearance will be most easily understood by looking at my figures. The three above-mentioned forms of deposit are found present in more or less abundance even in the pedicels, processes, and tentacles. The end of the pedicels is strengthened by a terminal perforated plate, surrounded by numerous transversely placed spicula (Pl. XXXVI. fig. 19), which decrease in number towards the middle of the pedicel, where they cease totally. These spicula are fusiform, rather long and slender, straight or arcuated, with their ends more or less spinose, a few being branched, and others enlarged in the middle and punctured with one or more holes. The dorsal processes have only a few scattered spicula which do not lie crowded together at their tops. Many more or less arcuated spicula of very variable size are present in the tentacles. The deposits of the oral disk are partly made up of wheels of various dimensions and dichotomously branched bodies, partly of simple or branched, straight or slightly curved spinose spicula which have sometimes a cruciform shape.

The calcareous ring forms a continuous whole of an extremely fragile and spongy structure, which a solution of potass separates into pieces, though not into distinctly regular ones. The posterior part of the ring, or that portion which is directed upwards, when in its proper position, is penetrated by five rather large holes. The polian vesicle is unusually small, only 6 mm. long. The madreporic canal (Pl. XXXVIII. fig. 6) communicates with the exterior by a number of pores, from eight to about fifty, situated close together immediately in front of the genital process, and about 20 mm. behind the anterior extremity of the body. When the number of pores is great, they are closely crowded on a small space, which being slightly depressed below the surface of the surrounding perisoma, becomes strikingly like a madreporic plate (Pl. XXXVIII. fig. 7). These pores communicate with a corresponding number of minute canals which pierce the perisoma and open into a comparatively thick madreporic tube. The above-mentioned canals often bear one or more branches, and their walls contain numerous dark violet pigment cells, thus becoming most conspicuous; they are often of a flask-shaped form, and completely wanting in calcareous deposits. The madreporic canal itself is strengthened by a great number of thread-like, irregularly branched calcareous bodies (Pl. XXXVIII. fig. 8) of variable size. The pedicels communicate with ambulacral cavities, while the processes, on the contrary, are in connection with ambulacral vesicles. The spacious ambulacral cavities, which are elongated and lie in the thick layer of connective tissue of the ventral perisoma, are of two kinds according as they belong to the pedicels of the inner or outer row; those in connection with the pedicels of the outer row are widest where they communicate with the ambulacral vessels, while the other cavities are here comparatively much narrower, but increase in such a manner, that their greatest width is at a considerable distance from the ambulacral vessels. Both kinds of ambulacral cavities (Pl. XLII. fig. 4) terminate in several short cæcal prolongations.