

in simple lacunæ, which are, for the most part, formed by a rupture of the inner trabecular framework. Wherever a hydranth arises, the chamber layer, the outer trabecular framework, and the outer wall, become perforated by a canal opening to the exterior.

The chamber layer is but slightly folded, a circumstance which is in harmony with the slight thickness of the whole body-wall.

The principal lattice-like framework of the skeleton consists of long compact spicules with a varied number of rays, but especially triacts and diacts, which, with the more delicate comitalia that surround them, are, for the most part, disposed in bundles, and firmly united by means of numerous synapticula (Pl. X. figs. 3, 6). The circular beams lie as before on the inner side of the longitudinal, while the oblique strands are irregularly interwoven throughout the entire lattice-work. In the narrowed funnel-shaped terminal portion of the sponge the spicules of the framework are more delicate, shorter, and more amalgamated.

The looser parenchymalia are in part extended spicules among which diacts seem to predominate, which are provided with conical or rounded rough extremities, and in part small delicate hexacts with fine transverse prickles, and lastly rosettes of two kinds. The one type includes discohexasters with few, usually three, long terminal rays on each of the six short principals. Where the principal ray divides an irregular tubercular thickening occurs, and from this the somewhat distant, narrow, diverging terminals which separate from one another project outwardly, while the extreme ends bear small discs with from four to six transversely disposed, inwardly bent, thin hooks or claws (Pl. X. fig. 5).

The other rosettes are, it is true, likewise discohexasters, but they may be distinguished from those just described in different respects.

The entire appearance is essentially different since, besides the stellate, the spherical form also prevails (Pl. X. fig. 1 ; Pl. XI. fig. 4), on account of the great number of equally long terminal rays which bear hemispherical transverse terminal discs. Each of the six short principal rays passes at first into a discoid expansion, which bears on its arched outer surface numerous (about thirty) terminals, which increase somewhat in strength towards the exterior, and are disposed in a radiating and divergent fashion. The hemispherical terminal discs of these terminal rays have a sharp-pronged margin which extends inwards in a somewhat campanulate manner. In some cases the number of the terminal rays on these rosettes is less, each principal ray bearing only about seven terminals. It is noteworthy that the rosettes, which have on the whole a spherical appearance, and are provided with hemispherical terminal discs, always occur only in the neighbourhood of the outer skin (Pl. XI. fig. 4), whereas the stellate forms which are provided with transversely disposed terminal tubercles are, on the other hand, scattered throughout the whole parenchyma.

Whether the bundles of very fine raphide-like spicules, which I found here and there in the parenchyma in the neighbourhood of the outer surface, are to be regarded as the broken off terminal rays of graphiohexasters or as independent groups of spicules, I cannot