

same form were also obtained. Three sides of this irregularly quadrangular plate, which measured about 1 foot square, exhibited much torn margins, but on the fourth the natural border was preserved. On the very probable supposition that this border, which is about 40 cm. in length, represents the upper margin of the sponge, and that no great portion is wanting, the whole form would be that of a sack or cup, whose upper aperture would be about 13 cm. in diameter. At the much destroyed margin, opposite to the intact border, and, therefore, probably the lower, the sponge is as much as 1 cm. in thickness, and decreases gradually from this point to the upper somewhat sharp margin. In order to convey an idea of the character of the outer and inner surfaces I have figured a portion from the middle in its folded position (Pl. XVIII. fig. 1). While the outer surface appears uniformly flat, and merely exhibits numerous subdermal cavities of varied size, the inner surface bears numerous round excurrent orifices belonging to the efferent passages, and varying from 3 to 12 mm. in diameter. These are irregularly distributed, at intervals of 5 to 15 mm., and show at the bottom that they are ramified. Between these wide excurrent orifices a comparatively flat surface is seen, only perforated here and there by small apertures.

The principalia forming the supporting framework of the entire sponge are hexacts with long smooth and flexible rays,¹ which are accompanied by long, thin, and very flexible comitalia. The parenchyma also contains numerous hexacts, of median size, with tubercled rays, further small hexacts with smooth rays, and finally rosettes of two kinds. Among the latter the oxyhexasters, which are present in great abundance, first attract attention. They bear on each of their short principal rays, which are somewhat expanded outwardly, four long narrow terminals (Pl. XVIII. fig. 10). The second form of rosette, which belongs to the discohexaster type, is smaller, and bears, on the gently convex transverse terminal disc of each principal ray, a bundle of about thirty delicate terminals which become broader towards the outer extremities, and which are beset laterally with numerous small barbs, and provided terminally with a four-pronged transverse disc (Pl. XVIII. figs. 3, 5).

The hypodermalia of the dermal skeleton have a slightly spindle-like thickened distal ray with scaly teeth, a long smooth proximal which runs to a point, and four simple, smooth pointed, transverse rays (Pl. XVIII. figs. 2, 8). Whether the large and strongly-developed floricoles which occur very abundantly scattered on the outer surface in many regions (Pl. XVIII. fig. 4), are regularly attached to the distal rays of the hypodermalia, as in the Euplectellinæ, I cannot definitely assert, since I have not found them in this position. It is, however, quite possible that, on account of the great softness of the whole plate, they have been pushed out of their original position.

The hypogastralia are likewise hexacts with a prolonged parenchymal ray, but the freely projecting proximal is not thickened into a spindle, nor scaly and pronged, like

¹ In Pl. XVIII. fig. 2, the rays of these hexacts are represented much too short and too straight.