

rays are never so much prolonged. Hexacts seldom occur among the parenchymal spicules, and like the somewhat more frequent pentaacts are irregularly developed. The numerous tetracts which are present, exhibit, indeed, for the most part, rectangularly intersecting axes, but these seldom lie entirely in a plane, being for the most part uniformly bent towards the surface; it may be that the two rays belonging to one axis run out in the same direction and straight, while the two others are somewhat bent, or are disposed at an obtuse angle to one another. Sometimes tetracts occur with one of the rays disposed at right angles to the surface of the three others. The majority of these parenchymalia have only two or three rays. Of the triacts the two rays belonging to the same axis are usually bent in a slight curve, from about the middle of the convex or concave side of which the third straight ray springs (Pl. V. fig. 16). The diacts are sometimes straight, sometimes slightly bent, pointed at both ends, or more or less rounded. They exhibit in the middle of their axial cross, four, two, or one tubercle, and are frequently roughened, not only near their ends, but throughout.

Peculiar small, straight, rough diacts, with truncated or rounded extremities, and with four tubercles projecting markedly from the axial cross and often exhibiting central terminal points (Pl. V. fig. 7), occur abundantly in the thin circular membrane which surrounds each of the parietal gaps. As a rule, the two rays are equally long, but forms also occur with two long unequal rays, and others which by the very great shortening of one ray have become monacts.

Both in the outer and inner trabecular framework rosettes occur, scattered quite irregularly in the form of oxyhexasters, whose short principal rays bear usually three (Pl. V. fig. 2), seldom four, straight, long, more or less stout terminal rays. The rosettes represented by Wyville Thomson on Pl. V. figs. 3, 8, I have only discovered in those greatly damaged fragments which were much mixed with the spicules of other Hexactinellida, and which were collected off the coast of Brazil (Station 124). These latter rosettes probably do not belong to *Euplectella suberea*, but appear to me to have originated in other Hexactinellida, and to have become accidentally embedded in these specimens. At least in sections of *Euplectella suberea* (collected to the west of Gibraltar), I have never been able to find such rosettes *in situ*.

*The dermal skeleton* consists of a layer of dagger-like delicate hypodermal hexacts with rough conically pointed extremities, which have their tangential rays so apposed to one another under the bounding membrane that a rectangular meshwork is formed, while the proximal ray penetrates deeply into the parenchyma, and the distal ray, extending to the very tip of every minute tubercle of the skin, bears the somewhat freely projecting floricome (Pl. VI. fig. 3).

It is noteworthy that on the top of those flat archings which project outwards between every four parietal pores, the much prolonged distal ray of a specially large hexact usually projects at right angles to the surface, and instead of carrying a floricome