

All the uncinates in *Farrea occa* are disposed at right angles to the surface, and thus traverse the wall of the tube in a radial direction. The sharp external point does not, however, penetrate the dermal membrane, but at most reaches it. The inner weaker, and always pointed ends remain at some distance from the gastral membrane, varying according to the relation between the length of the uncinates and the diameter of the tube-wall.

Besides the uncinates, parenchymalia are represented by simple oxyhexasters in more or less abundant occurrence. In these the long smooth principal rays divide into two to four widely diverging, straight or gently curved terminals, half as long as the principals (Pl. LXXI. fig. 7). These oxyhexasters occur most abundantly in the subdermal and subgastral trabecular space, but more sparsely in the middle layers of the tube-wall, even between the chambers, without, however, being altogether absent (Pl. LXXI. fig. 3; Pl. LXXIII. fig. 2). They are embedded in the trabecular network itself, and I am inclined to think that the formation of the trabeculæ and their interconnection is of the greatest importance in relation to the form of these spicules. In Carter's specimen of *Farrea occa* the terminal rays of the rosettes were as a rule smooth and pointed, though occasionally microspined and more or less "capitate." In the specimens which I examined, on the other hand, there were never any traces of terminal knobs or discs on the terminal rays of the rosettes, that is to say, of transitional forms between oxyhexasters and discohexasters. I have, however, found specimens of *Farrea* in which the rosettes were exclusively discohexasters, and these of an unusual type, but these were representatives of a second species, namely, *Farrea sollasii*. Other specimens in which, besides the oxyhexasters, discohexasters also occurred, belonged to a third species, *Farrea vosmaeri*. But if the different forms of rosettes as above noted really occur in one and the same sponge, with distinct transitional types, then the forms which I have designated as two distinct species, *Farrea sollasii* and *Farrea vosmaeri* may perhaps be regarded as varieties of *Farrea occa*. I have not, however, as yet discovered such transitional forms, and shall therefore meanwhile continue to regard these divergent specimens as distinct species, until their relation to *Farrea occa* be indisputably established.

Besides the uncinates and the above mentioned rosettes, the parenchyma of *Farrea occa* contains simple hexacts, of the same size as the rosettes, with smooth or rough, straight, pointed rays, which usually exhibit a knob-like thickening on their point of intersection. While these simple oxyhexacts have only a rare and isolated occurrence in the upper younger portions of the *Farrea* stocks, they are abundant in the lower portion, and in older stocks even numerous in the pedicel, and in the basal plate, within the meshes of the dictyonal framework, where they are abundantly fused to the dictyonal beams, so that by the gradual thickening of the rays, and their union with adjacent strands, they contribute to the thickening and compacting of the connected skeleton.